

BIRDS OF OUR BUSH



— OR —
PHOTOGRAPHY
— FOR —
NATURE-LOVERS

By R. T. LITTLEJOHNS
and S. A. LAWRENCE.

FOR THE PEOPLE
FOR EDUCATION
FOR SCIENCE

LIBRARY
OF
THE AMERICAN MUSEUM
OF
NATURAL HISTORY

BIRDS OF OUR BUSH

Or

PHOTOGRAPHY FOR NATURE-LOVERS



White-browed Wood Swallow on nest.

BIRDS OF OUR BUSH

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Photography for Nature-Lovers

BY

R. T. LITTLEJOHNS and
S. A. LAWRENCE

Members of the Royal Australasian Ornithologists' Union
and
Nature Photographers' Club of Australia

With an Introduction by

J. A. Leach, D.Sc.

Colonial Member British Ornithologists' Union and
Vice-President Royal Australasian Ornithologists' Union

*ILLUSTRATED FROM PHOTOGRAPHS
BY THE AUTHORS*



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INTRODUCTION

IN the early days of the Gould League of Bird Lovers, the executive secretary, Mr. H. W. Wilson, B.Sc. (now Major Wilson, O.B.E., M.C.), drew my attention to the fine work being done with a cheap camera by two young bird-lovers. Great things were then predicted of the youthful nature photographers. The pictures published in this volume enable readers to judge how well those predictions have been fulfilled.

Fortunately, the two authors have grown up in the best traditions of the League, and have fully kept their pledge not to destroy our native birds and to do all possible to influence others in the same direction. Doubtless their published work for years to come will further assist in bird protection, for this volume promises to be but the first of an important series.

Later, when the young enthusiasts, feeling themselves cramped by the narrow limits of the area available to them, and regretting that they had not the chance of doing work of value or importance, asked the writer for advice, they were assured that their own locality was the proper place for work, and were advised to know their own district first. Thus they would lay the foundation of a knowledge of birds generally, and acquire sufficient information and experience to attack, at a later date, the study of the birds of any other locality. The distribution of birds is remarkably uniform, owing to their powers of rapid and easy locomotion; so the knowledge of the birds of one locality is a good starting-point for the study of the birds of any other region.

The authors have devoted themselves steadily to faithful work in their own region, and have achieved success,

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renown, and a place amongst the leading bird-photographers of Australia. Many of their pictures have been accepted for publication in "The Emu," the official journal of the Royal Australian Ornithologists' Union, and admittedly one of the best-produced journals in the world. The ornithological facts recorded can be accepted as scientifically correct.

The book will be very valuable to those desiring help in becoming photographers, and also to those desiring to obtain a good knowledge of local birds. Prompted by the example of these successful naturalists, boys and girls will learn that there is no royal road to success, but that patience, work, and steady effort command and almost invariably achieve success.

Such faithful work cannot be done by any student without his gaining a real first-hand knowledge of the subjects treated. Already the authors have won an assured place as knowing thoroughly much of the life history of several characteristic Australian birds. Indeed, the success achieved has placed them in the front rank of Australian ornithologists and naturalists.

It is hoped that many will follow in their footsteps and develop an interest in the Australian avifauna, one of the richest in the world, but one which is, unfortunately, passing away before the "advance of civilisation." Many of our birds seem doomed to extinction. The lyre-bird, so well treated later, will, we fear, cease to be heard in the beautiful gullies described. The fox has discovered the nest, usually so easily reached; and the one egg or chick is often destroyed. It is hoped that the attempt to introduce the lyre-bird into Tasmania will be successful, for the fox has not reached that island. The lyre-bird, though confined to the region adjacent to the mountains, practically from Melbourne to Brisbane, is still destroyed for the plume trade and for so-called "scientific specimens." Permits should not be issued to private collectors desiring skins of lyre-birds; and, of course, no export of the beautiful tail-feathers should be permitted. It is not long since 120 such feathers were listed for a London plume sale. As only two of the broad feathers are in each tail, at least sixty male birds in good plumage must have been destroyed for that one sale.

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Especially notable is the success achieved by the enthusiastic authors in the study of the mistletoe-bird, the Swallow *Dicaeum*, or flower-pecker, of gorgeous plumage. This bird is found through the islands to India. Wherever the bird is found, this mistletoe is found; and wherever the mistletoe is, there is the bird—a most interesting partnership of a plant and bird. Both are absent from Tasmania—evidently Bass Strait was formed before either reached so far south. Messrs. Littlejohns and Lawrence have added to human knowledge by their observations of this bird and its family life.

It is remarkable how often it happens that there is in Australia just one species of a family well developed elsewhere. Thus Australia has one stork, one crane, one bustard, one roller, one swan, and one flower-pecker.

Another family of birds of similar range reaching from India is the wood-swallow, finely depicted on page 151. The wood-swallow, strictly so called, is a stationary bird, but the white-browed and masked species mentioned are migratory birds.

Bird migration is a branch of bird-lore not so well known to Australians as to the inhabitants of some older settled countries. In our winterless climate, there is not the strong regular migration seen in northern colder lands. Still Australian migrations possibly surpass most others in romantic interest. Fancy the journey between Australia and Siberia made twice annually by not fewer than thirty-five species of our birds! Members of six of these species even reach New Zealand and return to the Arctic each year. Then there is the fairly regular annual migration north to Queensland, and possibly to New Guinea, of some of our cuckoos, the bee-eater, the roller, and many other birds. There are also partial migrants, such as the robins, which retire to the mountain gullies or to Tasmania to breed, and later return to the houses and towns for the winter. Here, too, must be grouped, though the movement is less regular, the travelling flocks of lorikeets—"green keets"—that follow flowering eucalypts from Queensland to Victoria, just as shearers work south from shed to shed.

Worthy of record, too, are the irregular nomadic movements of quail, cockatoo-parrots, many water birds and

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others, when drought drives them in some seasons far south, as it did in 1919 and the beginning of 1920. Many facts recorded by the authors in this volume will help to a fuller knowledge of Australian bird migrations.

One pleasing and perhaps unexpected result of the work of Messrs. Littlejohns and Lawrence is to prove that photography is not necessarily an expensive hobby. The apparatus they used was of the simplest and of moderate cost. The directions so clearly given will enable many to follow in their footsteps. May their effort meet with the public recognition it deserves.

J. A. LEACH.

PREFACE

THE object of this book is definite and restricted. No claim is made on its behalf to rank as a complete or a scientific treatise on Australian birds. It is simply a record of eleven years' work—if a pleasant occupation may be termed work—among the native birds of a limited portion of our great Continent, and a testimony in pictures to the possibilities of Nature photography.

Our decision, as young observers entirely unequipped in literary ability, to commit our experiences to writing, was a momentous one. The idea originated in a deep desire to see placed in the hands of the public, especially of the younger generation, a volume which would set out clearly the possibilities and the accessibility of bird observation by means of the camera. We are convinced that the object of such a publication will commend itself to Nature lovers as well as to photographers.

The possibilities of bird photography, we know, are not for the first time herein demonstrated, as there are already books available which contain excellent pictures of Australian birds in their natural surroundings.

The accessibility of this method of study to the observer of slender means, however, has not hitherto been touched upon, and it is in this direction that we hope our book may justify its existence. For some reason unexplained, bird photography has been regarded as an expensive hobby. The results we have been able to obtain, with an inexpensive outfit and without travelling far afield, should help to dispel such an idea.

The photographs reproduced represent the best of some hundreds of studies taken during pleasant week-end acquaintanceship with the bush and its inhabitants. There are no faked pictures, no tame birds, no wounded subjects. Our plant, moreover, comprised only two cheap cameras, an

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abundant supply of energy, and a considerable stock of patience. Sometimes we were able to include, also, a railway ticket to some country district near at hand.

Any trace of scientific ornithology which may be found in the pages which follow has been admitted with some misgiving, as we realise that this branch of bird-study is mostly outside our realm. The scientific names of the species mentioned have been included at the end of the book simply and solely for the purpose of identification. We cannot guarantee even that the nomenclature used will please all ornithologists, but we intend to shelter in this regard behind the excellent and common-sense "Australian Bird Book," written by Dr. J. A. Leach, and produced by the publishers of this volume. The help we have derived in the field from the work of this writer has been considerable.

Our chief indebtedness to Dr. Leach is of a more personal nature. His experienced advice on many questions has simplified our work, and besides he has written the Introduction to this book. In return for the valuable time he has thus spent, he asks but one thing: that we do all in our power to further the cause of Nature Study.

In conclusion, we must make an acknowledgment of the part played in the production of this volume by our parents and by other members of our families. Without their financial assistance during our younger days, and their encouragement at all times, the photographic results we have obtained would not have been possible. They also placed at our disposal the house which has sheltered many happy week-ends at Ferntree Gully. To Mr. R. W. Littlejohns our special thanks are due. From the outset he has spared no pains and no expense to encourage us in our efforts. Not only did he purchase one of the cameras we still use, but also provided us with several pieces of apparatus without which the task of preparing the illustrations for this book would have been a heavy one indeed.

We feel sure that parental assistance, in money and otherwise, corresponding to that which we were fortunate enough to receive, will bring a deep and lasting satisfaction to all whose children show a genuine desire to read from the great open book of Nature.

R.T.L. AND S.A.L.

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BIRDS OF OUR BUSH
OR
PHOTOGRAPHY FOR NATURE LOVERS

PART I.

Bird Photography

.



Blue Wren (female).

CHAPTER I.

ON COLLECTING WITH A CAMERA.

THE reader even at this early stage has been made aware that we have little knowledge of what is generally accepted as scientific ornithology. The reason is a twofold one. In the first place, our travels have been restricted to a comparatively narrow area and, secondly, the problems of nomenclature and sub-division of species interest us not at all. However, we take a sufficiently broad view to realise that it is impossible that everyone should view the latter question from our standpoint, and we hope that the contents of this chapter will not be regarded by scientific ornithologists as anything in the way of recrimination. At the same time, we feel bound, in our endeavour to popularise the method of observation which we follow, to point out the advantages, as they appear to us, of photography over the practice of collecting bird skins and birds' eggs.

The value of collections of bird skins and birds' eggs to the scientific ornithologist lies in the fact that, with a mass of material before him for comparison, he is able to place the various specimens in what is considered their correct scientific groups. The subdivision of the original groups has been carried in these days to such a point that what appears to the ordinary observer as one species of bird may now be split up into several further divisions or sub-species. The variations, moreover, which distinguish these sub-species are so slight in many instances that a most minute examination is necessary to determine the identity of the specimen—hence its untimely end. Just where the advantage of all this investigation comes in we, as laymen, are unable to say. Certainly we can point to a serious dis-

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advantage in the amount of slaughter entailed. A limited display of mounted specimens in a public museum we consider justifiable, by reason of a certain educational value, but shapeless skins and empty egg shells are suitable only for the cabinets of those interested in the problem of nomenclature.

However, the primary object of this book is to demonstrate the advantages of studying bird-life by means of the camera, and not to discuss the disadvantages of other methods. Notwithstanding many opinions to the contrary, photography of birds, so far as its cost is concerned, is within the reach of almost everyone. There are few people indeed who cannot lay aside thirty shillings or so for the purchase of a camera. That done, there is no more expense connected with the photography of birds than with the photography of anything else. Probably, indeed, there is less, as the birds themselves can be relied upon to arrange the number of plates which are to be exposed in a day. Usually they are few. At the age of sixteen or so we were not millionaires by any means, and we managed to secure pictures without serious financial stress. Even now, we would not be indulging our tastes for bird photography if it were expensive.

Much of the interest of this branch of photography, of course, depends upon the tendencies of the individual. A person who finds no interest in Nature Study cannot expect to find any great interest in Nature photography. We are quite sure, however, that this method of observation would be much more popular than it is amongst Nature-lovers were its interest more fully realised. We have at one time or another tried most forms of sport, and can say truthfully that we know of no more exciting pastime. Fishing and shooting we have sometimes found exciting, but the remembrance of such occasions has soon faded. The sense of excitement felt when a bird, perhaps a rare one, approaches the correct position for photography, is intense, and the memory of it, furthermore, is perpetuated if the exposures made result in good pictures. A great deal of the attraction of the hobby lies in the skill required both in the field and in the dark room to produce convincing results. For this reason successful photographs are far from common—a fact which adds considerably to the satisfaction felt when one is obtained.



Blue Wren (male).

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The pictures themselves have a decided advantage over the results of most other forms of sport. They are lasting, and there can be no doubt that they form a most efficient and easily distributed means of education. More especially is their value apparent where young people are concerned.

The Nature photographer, too, is, or should be, a fairly thorough observer. The time and patience required to achieve success in the photography line leave plenty of opportunity for studying the habits of the subjects. In fact, success very often depends on the photographer's knowledge of such matters.

Our chief argument in favour of photography as a means of observation, however, is that the photographer, in gaining his ends, need leave no trail of destruction in his wake. The collector, whether he shoots the birds or takes their eggs, has only desolation in one form or other upon which to pride himself should he contemplate the result of his day's work. The photographer, on the other hand, leaves, or should leave, his subjects just as he found them, and no worse for his interference. He may go back again if he wishes, to observe the progress of his friends or to picture some new phase of their lives.

As we read over what we have so far written regarding our method of collecting and the other methods mentioned, we are "amazed at our own moderation." We could say much more were it not that we consider the foregoing arguments sufficient for most people. One thing we will admit. We have not attempted to find any respects in which these other methods may be an improvement upon ours. But we grudge no egg or skin collector his undoubted right to enlarge on the subject from his standpoint.

When carried out with sound common sense the pursuit of such a necessarily out-door occupation as Nature photography cannot be otherwise than healthy, but such practices as lying on wet ground and standing in water are often indulged in by enthusiasts. Sane persons, however, will not risk their health in these directions. We have, so far, felt no ill effects as a result of a fair experience of such foolishness, but others may not be so fortunate. The amount of out-door exercise which the production of the pictures in this book has involved would probably come as a surprise to most. Certainly it goes a long way towards



White-shafted Fantail at nest.

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explaining our gaunt and underfed appearance as indicated in some of the photographs.

Upper Ferntree Gully has been our principal hunting ground, and here we were so fortunate as to have the convenience of a week-end house as headquarters. Further, the Ferntree Gully district is a fine one for this class of observation. Our visits to the locality usually commenced in July and ended in January. In this time it was not unusual for us to spend at the house twenty-six week-ends, working hard all the while. The few intervening week-ends were spent at Greensborough or some other favourite locality.

The July and August visits to the Gully were particularly strenuous and uncomfortable, our object being to discover the nest of the Lyre Bird, odd pairs of which still survive the gun and the fox in the deep gullies thereabout. Our quest led us through the roughest and dampest country in the roughest and dampest weather. Often we followed on hands and knees for miles through mud and slush as the birds worked from one gully to another, disturbing the while quantities of the soft loam with their large powerful feet in their search for food. Frequently we were within a few feet of them on such occasions, or as the male danced on its mound. Yet our quest of a nest has so far been in vain. By the end of August numerous species had commenced nest building in the open country, and we transferred our attentions thence. During these week-end jaunts wind and weather caused no abatement of our efforts. Darkness alone deterred us. Such trifles as meals and the like were forgotten while daylight lasted, and not infrequently Saturday night's tea was our only proper meal from Friday to Monday.

We have visited many other localities within easy reach of Melbourne, and of course we could not boast a week-end house at each. When we found it necessary to spend the night at Greensborough, Evelyn, Eltham, or elsewhere, we either sat before a fire or walked all night. We have never yet been able to sleep on any kind of camping trip. We must be colder mortals than most. Probably we are, for companions who sometimes accompanied us, not only succeeded in sleeping through the coldest nights, but also in spoiling what little chance we had of doing likewise



Nest and Eggs of Coachwhip Bird.

BIRDS OF OUR BUSH

by the audible nature of their contentment. When on bird photography expeditions we were usually alone.

We have a most vivid remembrance of one night spent beside a small creek at Evelyn. We wished to obtain a picture of the parents of the little Mountain Thrush, whose portrait appears on page 29, and decided to build ourselves a comfortable mia-mia (if such a mia-mia can be imagined) beside the nest. Oh! and we had a camp bed, too, a luxury we seldom thought of and never felt like carrying. Half-way from the station to the creek it started to rain—rain properly and thoroughly. By the time we reached the nest we were wet, the bed and bed clothes were wet, and all the material with which we had hoped to build a shelter was well and truly wet. The wood which should have made us a fire was also wet, and it was almost dark. After scraping under logs and in hollow trees for an hour or so, and wasting countless matches, we at last succeeded in starting a fire. We sat by it till daylight. All this we would have felt thoroughly worth while had we, after all, accomplished our object, but we did not. Those perverse parents point blank refused to feed their children while the camera faced in their direction. We tried our patience against theirs for a considerable time—and they won.

Evelyn was unkind to us on another occasion. One ominous-looking morning we disregarded our better judgment and embarked on a day's ramble. The extent of the ramble turned out to be from the Evelyn station to a large hollow log not far from the scene of our previous little comedy, and back to the station after the lapse of several interesting hours. Our chief amusement during this time consisted of guessing competitions as to whose neck the next drop of water would choose. On this occasion, however, the discomforts of the hollow log and of a subsequent two hours' train journey in sodden clothes was almost compensated for by the production of a picture which, though by no means good, still is highly prized by reason of the difficulties under which it was taken. Not far from the log a pair of Scarlet-breasted Robins had a nest in a pile of wood, and in desperation we decided to brave the elements in an attempt to expose a plate or two. What little doubt there was as to whether we were already thoroughly wet was dispelled completely before the photograph reproduced on page 41 was obtained. The necessity for a lengthy

ON COLLECTING WITH A CAMERA

exposure added to our difficulties. The memory of these incidents, and many others besides, are called up before our minds as we look through our album of prints, and we become still more convinced that the results we have obtained would give us considerably less satisfaction but for the individual associations of each picture.

The amount of walking and climbing involved in the pursuit of photographs caused us to feel rather lost when the nesting season was at an end. To fill the gap somewhat we have indulged in several walking tours of greater or less duration. These are now pleasant memories also, but cannot well claim relationship with the object of this book. One thing we would say, however, for the benefit of those who may feel a disposition towards this particular form of discomfort, "Don't load yourself up with all the comforts of home, or you will be sorry." On the other hand it is essential, if the trip is to be at all enjoyable, to carry sufficient covering to make the nights bearable and sleep possible.

We venture to suggest to the parents of any growing boy, that they should place no unnecessary obstacle in the way of his study of Nature if he is disposed that way—that they should in fact encourage him as far as possible. We firmly believe that such action will never be regretted.



Orange-tipped Pardalote.

CHAPTER II.

THE APPARATUS.

THE increased interest evident recently in Nature Photography has prompted us to devote a considerable space to such description of suitable apparatus, and to such instruction in its use as our experience enables us to offer. It must nevertheless be borne in mind that no amount of instruction nor advice can make a successful bird photographer. The observer must meet and overcome his own particular difficulties and buy his success with actual experience. Our efforts may serve at best to allow the beginner to start a little farther along the road than we ourselves did. We would have found a little advice, such as that included in this and the following chapter, very helpful in our early and youthful experience. As an instance, had we known that it was altogether impracticable to obtain pictures at close quarters with a camera, the construction of which did not admit of accurate focussing, we would have avoided the waste of several dozen plates. It is in the hope of preventing a repetition of the discouragement we felt at these, our first attempts, that we have, even at the risk of inflicting wearisome details, made these hints as complete as possible for the benefit of those who may find bird photography a congenial hobby.

The very first word of encouragement we wish to give is that anything elaborate and expensive in the way of outfit is unnecessary. Most of the photographs illustrating these pages were taken with cameras costing thirty shillings and four pounds respectively. Further, quite as satisfactory pictures have been obtained with the thirty shilling one

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as with that costing the greater sum. We could go further still and say that some of our illustrations are the work of a magazine or box camera, costing ten shillings only. As we have hinted previously, however, a box camera is not advisable for this work, and the disabilities under which we laboured while using one would have probably damped the ardour of most. It is much better that the beginner should purchase a camera giving reasonable facilities even if it should mean, as it did to us, a period of "saving up."

The idea that an expensive outfit is indispensable is held by many. Even so keen a naturalist as Mr. Donald MacDonald, of the Melbourne "Argus," once advised a correspondent to this effect. We can only say that we are quite satisfied with our low-priced apparatus, and will leave the reader to judge the results obtained by their use.

Perhaps the first question which a beginner must decide is the size of the camera to be used. We have always used quarter-plate ourselves, and this appears to us very suitable. We certainly should not advise any smaller pattern. Many naturalists use half-plate; but it must be remembered that the cost of half-plate material is now double or more that of quarter-plate. The difference in weight and size is also a consideration, when there is much walking to be done. Still, it cannot be gainsaid that half-plate pictures look very impressive as against the smaller size. On the other hand, the small negatives, or such of them as are worthy, will yield half-plate enlargements which will compare very favourably with the direct prints from the larger size. Again, if a plate is wasted—and many a one certainly will be—the loss of a quarter-plate is much less serious than that of a half-plate. A plan adopted by some is to use quarter-plates in a half-plate camera by means of carriers fitted inside the dark slides. However, we have always regarded the slight advantages gained by this method as insufficient to justify the carrying of the extra weight. There is also a reason, which involves a knowledge of optics and is too advanced to be set out here, why the short focus lens provided in smaller cameras is more suitable for this class of work than the longer focus ones fitted to larger patterns. The illustrations in this book are printed from enlargements of quarter-plate pictures.



Young Mountain Thrush.

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Whether quarter-plate or any other size, however, the camera, to be of any use, must be capable of extension, and must admit of focussing on a ground-glass screen. This is a most important requirement, and precludes the use of the popular film camera. While dealing with the question of extension, it may be as well to state our opinion that the bellows should be sufficiently long to allow of objects near the camera being brought into sharp focus. Our pictures are taken, as a rule, with the lens little more than eighteen inches from the subject, and a fairly long extension is usually necessary in order that this may be done. Few photographers, we believe, operate from such short range; but it has always been our aim to give a closer and therefore a more detailed view of the subject than is usually possible with the eye. The question of nearness to the subject is, of course, a matter to be decided by the individual taste of the photographer; but, whatever the distance, it should be proved before the apparatus is purchased, that it will meet requirements in this direction. This may be very simply done by extending the bellows to the full, and by measuring the distance at which an electric or other lamp is sharply outlined upon the focussing screen.

The lens is held by many to be a most important part of the apparatus. Our experience has been that the cheaper of our cameras, with the less expensive lens, has produced pictures every bit as sharp as has the more expensive one. Even the old magazine camera, with a lens valued at only a few shillings, was responsible for pictures which were passable at any rate, and, with proper facilities for focussing, would probably have compared favourably with the rest of our work.

The shutter is a most important item. Its chief requirements are that it should be easily and conveniently released, and that it should be as noiseless as possible. A stiffly-working shutter is always liable to cause vibration of the camera when operated from a distance in the way we suggest later on. Even the least expensive of folding cameras will be fitted with a shutter which allows both time and instantaneous exposures. The division of the instantaneous exposure, however, into different speeds, such as $1/25$, $1/50$, and $1/100$ of a second will be provided only in the more expensive models. The provision of these different speeds is an advantage occasionally, but we have

THE APPARATUS

found the one-speed shutter, which usually works at about $1/25$ of a second, to answer all our requirements. If the form of release lends itself to the adoption of such a method, we recommend a length of cotton or thread as the best means of making exposures from a distance. Certainly it has the great virtue of cheapness.

The bird-photographer, especially, should be careful to choose a camera with strong bellows, and should examine them frequently for traces of pinholes which are liable to make their appearance at the corners. If these pinholes occur, and are not remedied, they are almost certain, on account of the length of time for which the camera is usually exposed in strong light, to result in the appearance of peculiar curved markings on the negative. Following the invariable course of all defects, these markings are certain to place themselves in the most noticeable positions. For a considerable time, a few years ago, almost every negative we developed was affected in this way to a greater or less degree. Many fine series of pictures were spoiled before the defect was discovered. Our disappointment in some of these cases was so keen that we go so far as to reproduce one of the spoiled pictures here for the sole purpose of enabling a beginner to at once put his finger on the trouble should similar defects at any time occur in his negatives.

Of the camera itself, there appears little more to say except that its general build should incline towards strength rather than towards elegance. The necessity for strength will be realised when the reader learns that our apparatus have many times been exposed in the rain and even left standing an inch deep in water, besides having received a full measure of the falls which are almost unavoidable when one is working in windy weather.

With all focussing cameras it is necessary to have dark slides or carriers for the plates. These should be carefully tested with a view to ensuring that they are as light-tight as possible when fitted in the camera, and the cover withdrawn. The length of time during which the slide necessarily remains exposed in the glaring sunlight, frequently deprived by the wind of the protection afforded by the focussing cloth, is a severe test on the closest-fitting slide. With this fact in mind, it is as well to provide



Welcome Swallow at nest.
(The marks below the bird were caused by pin holes in the
camera bellows.)

THE APPARATUS

oneself with a focussing cloth of as thick material as convenient, and to have it provided with metal rings and a cord in order that it may be easily secured to the camera or tripod. The cloths we use are made of two thicknesses of material, the inner one black and the outer one as natural-looking a shade of green as was obtainable.

Although we carried on for a considerable time without one, the convenience of a cheap tripod is not to be overlooked. Our first "tripod" was of a very cheap variety. It consisted of three sticks picked up at random about the scene of operations, bound together with string, and having a platform of bark or other material on top to hold the camera. We have gone ahead a little since that, however, and the class of tripod we now use is shown on page 39. We have found that the expenditure of a few shillings in this direction was quite justified. Latterly we have provided for ourselves also a light-tight changing bag, in which the dark-slides may be emptied or filled in daylight. This is of decided advantage, though not a necessity, the chief point in its favour being that, with its use, the number of dark-slides purchased need not be so large. The bag we use is home-made, square in shape, and built of two thicknesses of close material, with armholes and sleeves at two of the corners. The inside thickness of material being red, and the outside one black, ensures its safety even in sunlight, while an elastic band round the end of each sleeve keeps it tight upon the arm.

Our only other gear is a reel of black cotton or thread with which to release the shutter. Many photographers use a considerable length of rubber tubing for this purpose; but we have found the cotton to act very well, and certainly recommend its use where the form of the shutter is suitable. The tubing takes up much more room than does the cotton, is very liable to perish, and—most important—is fairly costly. It is absolutely necessary that the thread used be black; otherwise its movement at, or immediately before, the exposure will scare any but an exceedingly trustful subject. Black thread is almost invisible, a fact which the photographer will realise when he would avoid becoming entangled therein.



Young Flame-breasted Robin.

CHAPTER III.

INSTRUCTIONS IN GENERAL.

IN this chapter we wish to group some little advice on the use of the apparatus described in the previous one. These hints are intended primarily for the assistance of the novice who may derive some help from them until such time as he is able to supplant them, in whole or in part, by a new code of rules based on his own experiences. Even the experienced photographer may possibly find amongst them something new. Many of the matters referred to in this chapter may be found to be repeated in the chapters describing our experiences. They are collected here, however, for the sake of convenience.

It may first be mentioned that the photography of birds, as we carry it out, is practicable, as a rule, only during the nesting season, and in the vicinity of the nest or young of the subjects. This follows from the fact that some strong influence is necessary to attract the bird to a position a few inches only from the camera. On occasions we have been able to obtain pictures without any such influence, but these instances are always rare. It is an advantage, therefore, for the photographer to have at least some knowledge of the time and place at which nests of the different species are likely to be found. With this idea in mind we have included in the chapters which follow as many observations as has been possible on the habits of the different species.

The ordinary nesting season in Victoria extends from about August to December, although many nests will be found both earlier and later than these months. As to

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locality, we have no hesitation in saying that, notwithstanding the undeniable fact that many rare and interesting birds are found almost exclusively in the deep mountain gully, the right and proper locality for the beginner is that growth of small trees and shrubs which marks the course of some stream through open or lightly-timbered country. Our reason for recommending such a locality is twofold. In the first place, the smaller native birds nest in greater numbers in the class of country such as that around Eltham, Greensborough and Ringwood, than they do in the deep forest. Secondly—and most importantly—a good deal of experience and knowledge is usually necessary to enable the photographer to overcome the disabilities as to lighting which the dense timber imposes. However, whether the beginner takes or disregards this advice, he will do well to remember that the belt of country within a few hundred yards on either side of a stream, wherever it may be, is the favourite haunt of small birds.

The location of the nests themselves will perhaps appear to some such an easy matter as to render advice in this direction unnecessary. Our personal experience, however, of the number of nests which are passed unnoticed by the keenest observer prompts us to venture a few suggestions. The beginner is fairly certain to adopt the amateur plan of peering to right and left in search of the nests which happen to be directly along his path. A more satisfactory method, both from the point of view of interest and of efficiency, is to allow the birds themselves, by their movements, to point the way to their homes. It is a surprising fact that, if the observer sits or stands quietly and watches the movements of the birds about him, he will in a few minutes probably locate several nests where a haphazard search would have revealed none at all. We have always found our lunch-time spent in a likely locality to be specially productive in this direction. We do not wish it to be understood that we do not also keep a very sharp lookout for nests even in the absence of the birds. Some classes of nest show very little attempt at concealment. The observer should also inform himself, if possible, of the usual situation of the nest whose owner he happens to have under observation, and also of the period of the year during which nests may be expected. By this means he averts the very considerable danger of a painstaking search for

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the nest of an habitual ground-builder in the branches of a tree on which the bird happens to perch.

We will assume that the photographer has located one or more nests. It is not by any means every nest or every pair of birds which lends itself readily to photography, and very often it would be a waste of time to attempt it. The observer, then, must decide each case on its merits. It may be that the position of the nest is such as to render it impracticable to set up the camera, especially as we would urge that the nests be not unduly interfered with. There may also be insurmountable difficulties in the way of ensuring a sufficiently strong light for a short exposure. By far the most frequent trouble, however, is with the owners of the nest. In the case of the position of the nest, it may be said with a certain amount of truth that "where there is a will there is a way," but if the "sitter" will not sit there is an end of it.

The trustfulness of any proposed victim may often be roughly judged by parting the branches in front of its home and by placing a hat, focussing cloth or, in fact, anything unusual in the vicinity. The bird's actions will then usually indicate its temperament. As a rule, it is useless to attempt photography at a nest in which the eggs have not yet been laid. It is a trustful bird indeed which can be induced to face the camera without some greater attraction than an empty nest. On the other hand, a great number of birds which present great difficulties at any other time will be more or less easily dealt with when the nest contains eggs heavily incubated, or young ones newly hatched. Care must be taken on such occasions, however, that the subject be not kept too long from the nest; otherwise the eggs or young may be destroyed.

In setting up the camera, the operator's action will, of course, be guided by circumstances. But there are a few general rules which may be safely followed. In the first place, the camera must be placed in such a position as to keep the source of light nearly directly behind the apparatus. This precaution obviates the danger of heavy shadows on the print obliterating the detail of portion of the subject. When the source of light is well behind the camera, any shadow thrown by the bird will be on the far side, and will not appear to any extent on the negative. So strongly

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do we feel on the necessity of this precaution that in some few cases, where it has been impracticable to carry it into effect, we have packed up without exposing a plate, no matter how desirable the subject. The source of light may with advantage be very slightly to one side or other, however, in order that a slight shadow may give an appearance of relief to the result.

Another good rule is to picture the subject from as nearly as possible the view-point of the ordinary observer. In this regard we have a notion that the pictures one so often sees of nests and eggs taken from directly above, or of birds taken from almost directly beneath are unnatural in the extreme. In dealing with nests of eggs our invariable practice is to incline the camera only slightly downward, in order that a portion of the inside of the nest and a portion of the eggs may appear. We regard it as unnecessary to show the whole of the eggs; but we realise, nevertheless, that such matters are largely a question of taste.

The most important item of all, however, in the set-up of the camera is its distance from the subject. As we have mentioned previously, we are advocates of bird-photography from very close range, and regard eighteen to twenty inches as a satisfactory distance between the lens and a small bird. No doubt many readers, especially those with a knowledge of photography, will regard this range as unnecessarily close, and indeed few, if any, other operators in this line regard such close work as necessary. Any Nature-lover will admit that much of the charm of Nature Study arises out of the fact that the observer sees and knows the wild things of the bush more closely than the average person, and that from this very nearness there becomes apparent a great deal of beauty which is lost from a greater distance. Our contention is that a photograph, if it is to realise fully its possibilities, must re-produce this sense of nearness.

If the reader will examine the pictures which illustrate this book, he will realise that the details of build and plumage there depicted are such as will not, as a rule, be apparent when observing the birds with the eye. Most persons, for instance, know the Blue Wren. How many can say, however, that they have been able to pick out the details of plumage as the picture on page 19 shows them? As a practical illustration in this direction, we



Photographing in an Elevated Position.

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have included the picture on page 47, which will show the lack of detail in a photograph taken at a distance even slightly greater than usual. However, we wish to do no more than give the beginner the benefit of any experience we have had, and this question, as all others, must be decided by the taste and judgment of the photographer. When dealing with larger subjects, of course, the distance must be so increased as to cause the bird to occupy about the same area on the plate.

Before we leave the question of the position of the camera, we wish to draw attention to another common failing in bird pictures—one which, too often, is unavoidable to some extent. A glance at the picture of a Straw-necked Ibis, appearing on page 111, would give the impression that the bird represented was several feet in height, or at any rate much larger than a person acquainted with the bird knows to be the case. The reason for this unnatural appearance is the fact that the picture was taken with the camera (the old magazine one at the time) fastened to the ground at so low a level as to silhouette the bird against the trees and sky and to place it in direct contrast to the large building in the background. This example only goes further to support our idea that the camera should, where possible, be placed so as to look downward slightly on the subject.

When it happens that the tripod used is not high enough to support the camera in the required position, we always contrive to attain the necessary elevation by placing the tripod on a rough staging rather than by adding to the length of its legs. Sufficient logs, poles or other material may usually be collected about the locality, and some stout string does wonders in keeping these together. This rough structure, besides giving stability to the camera when worked by a thread, serves as a foothold for the operator as he focusses. These stagings of ours have many times been the cause of much merriment amongst other photographers, who never seem to accept our very kind invitation to use them when they accompany us. We must admit that a few times our structures have “let us down” at a critical moment, but we nevertheless prefer them to the great wobbly, unwieldy legs which other observers’ cameras are obliged to assume. Our sentiments towards the above-mentioned means of elevation must be somewhat



Scarlet-breasted Robin on nest.

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akin to that expressed by a very much married companion when he assured us after a particularly violent domestic "wind-storm" that he "loved her for her very perverseness."

The success of any Nature picture depends almost entirely upon the degree of sharpness with which the subject is outlined. In many branches of photography a slight lack of focus or "fuzziness" is allowable—in fact, sought after. In dealing with Nature subjects, however, the object of the photographer should be to convey to the person viewing the picture a clear idea of the appearance of the subject. The smallest detail should be distinguishable and perfectly sharp. To obtain pictures approximating to this standard, a great deal of trouble and care is required, and, incidentally, considerable contributions made to the "scrap-heap." It is rarely possible to obtain pictures which are clear and sharp in every detail, but the measure of success we have been able to attain in this direction is the result of a good deal of painstaking work. A little experiment will convince the beginner that if he uses his camera at a distance of twenty inches or so from the subject, the depth of that part of the field which will be in sharp focus is very slight. If, for instance, an object at a distance of exactly twenty inches is correctly and accurately focussed it is probable—almost certain—that a movement of the object half an inch forward or backward will result in the sharpness being almost wholly destroyed. That being so, the necessity for great care in focussing will be apparent. The adjustment of the lens to such a position as will render the focus sharp is, as a rule, not possible while viewing the bird itself upon the focussing screen. It therefore becomes necessary to focus on some object placed temporarily in the position which it is expected that the bird subject will occupy, and to make the exposure later when it does occupy exactly that position.

The first thing for the photographer to do is to choose some point at or near the nest on which it may be expected that the bird will perch. This is usually not a very difficult matter. If the nest happens to be an open cup-shaped one, the most likely part of the edge of the nest itself may be so selected. Where a picture of the bird on the nest is desired, the dummy to be focussed upon may easily be placed in such a position as will ensure sharpness

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when the bird sits on its nest. In other cases one cannot be certain just where the subject will perch, but it will usually be found that the bird, in approaching its nest or young, will make use of the highest and most prominent points, so that the choice of some such point near to the centre of attraction will be fairly safe.

The plan we adopt to ensure accurate focussing is to place in the desired position a dummy specially made and always carried (when it is not forgotten). The one we have used successfully consists of a piece of stick about the length and thickness through of an average small bird, and tapered to a point at either end. The central portion admits of due allowance being made, when focussing, for the curve of the bird's body, while the tapered ends form a guide to the position which the head and the tail will occupy. We always make a point of reserving the point of sharpest focus for the position in which it is judged the bird's head will appear, as on the sharpness of this portion of the picture depends, to a great extent, its success. The dummy, whether shaped as we recommend or otherwise, should have a surface showing plenty of detail, or may have printed paper gummed to it in order that the point of sharpest focus may be accurately judged.

Too much importance cannot be attached to the accuracy of focus if the picture is to be satisfactory, and the operator should take sufficient time to be sure that nothing is left to chance. Perhaps the awe-inspiring difficulties we have pictured even thus far may tend to defeat our object and to influence the beginner to make his exposures from a greater distance than we recommend, more especially as he will soon find that the difficulties we have mentioned decrease as the distance between the lens and the subject increases.

We have a little brief for our method up our sleeve, however. Experts who have commented on our work have specially praised two features. The first is the accuracy of the focussing. We have already mentioned one of the reasons for this virtue. We leave no stone unturned to make the focus accurate, and besides we turn out any plate which is not quite up to standard. The other feature is the pleasing way our backgrounds have of forming themselves into shadowy distances, which add to the pictorial



Brown Flycatcher on nest.

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quality of the picture, and do not draw the attention from the central figure. This fact we consider a very strong justification for the shortness of the range at which we work. The reader must accept our assurance that we have not in a single instance made up the background in any way. The shadowy appearance is the natural result of making the exposures from close quarters. We mentioned previously that objects slightly before or behind the spot focussed upon are not likely to be sharp. As the distance from the focussed point is increased, this lack of sharpness becomes more and more marked, until objects at a distance of a few inches beyond the subject resolve themselves into a pleasingly shaded background.

The camera finally placed in position and focussed, the operator should, before he retires to a distance (if such a course be necessary), satisfy himself that the shutter is operated satisfactorily by the thread. In fact, we make it a practice to go through the whole performance with the exception of the insertion of the plate to make sure that nothing has been forgotten. A shutter which requires re-setting after each exposure has been mentioned previously as an advantage. We may here state the reasons. In the first place it affords a direct proof, often very necessary when working at a distance, as to whether an exposure has actually been made. Secondly, it obviates the dire effects often caused by the operator becoming entangled in the thread as he proceeds to change a plate. This happens more often than the beginner will anticipate, and terms too strong for print are required to express adequately the feelings of the photographer who, after taking what he is confident is the best picture of the season, ties himself up in the elusive black thread and makes a second exposure on the same plate.

When the preliminaries have been arranged, the operator's real task begins. Except in the settled summer weather the strength of the light causes him continual anxiety, and the menace of a clouded sky hangs over him often, both figuratively and literally. In mid-summer the light is much more intense than during the earlier part of the season, and the advent of a few clouds at this time is rather an advantage than otherwise. In spring and early summer, however, sunlight almost undiluted is a necessity. Furthermore, clouds, showers of rain, and other little un-

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kindnesses of the elements have an annoying habit of intruding just at that moment, often waited for during weary hours, when the subject has plucked up courage to perch in the desired position. By the time these difficulties have disappeared, the bird has disappeared also.

It will be apparent that the brightness or otherwise of the light would be a matter of little moment if the exposure could be increased as the brightness of the light diminished. Practically all exposures, however, will need to be instantaneous on account of the movement of the subject. Time exposures, even short ones, we have found almost always to result in an absolute waste of plates. Pictures of a kind may be, and certainly are obtained in this way, by some photographers, but some slight movement is almost certain to occur which robs the result, to a greater or less degree, of the charm which attaches to sharpness. Birds sitting on their nests are sometimes so still as to afford an opportunity for time exposures, and this is the only circumstance which has led us to experiment in this direction. The picture of the Rufous Fantail reproduced on page 201, and that of the Scarlet-breasted Robin on page 41, are the only bird pictures in this book which are the result of time exposures.

The length of the exposure is governed by two factors. The first is the size of the aperture used. To the bird photographer this is a simple matter, as it is almost invariably necessary to use the largest opening provided. In mid-summer, however, the strength of the light may allow of "stopping down" slightly without increasing the exposure. If this can be done, it is of great advantage on account of the greater depth of sharpness attained. The second factor is the speed of the plate to be used. In this respect, also, very little latitude is allowed the bird photographer. The plates must be fairly fast, and besides need much more careful treatment in the dark room than do slow ones. The plates we use are marked with a speed number, about 300 H. and D. Uncorrected photographic plates give unsatisfactory results so far as colours (notably red and yellow) are concerned, but "Non-filter" or "Anti-screen" plates of different makes we have found to give much better results in this respect.

But the greatest tax on the patience of the photographer is the general disinclination of birds to be dealt



Yellow-breasted Robin and nest.

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with photographically. Some few birds may be relied upon to give little trouble; but by far the greater number are pictured only as a result of considerable scheming and planning. The point directly overlooked by the bright eye of the camera is, as a rule, studiously avoided until such time as the subject either becomes accustomed to its presence, or realizes that there is no way of avoiding its stare. If the camera be trained on the nest itself, there is little to be done except to wait patiently and quietly. If, however, a position apart from the nest be selected as the perch for the bird, it is often possible to hasten success by resorting to dodges such as those we here mention. Perhaps the most successful plan known to us is to remove all prominent points in the vicinity other than the one selected, or, if that cannot be done without undue interference with the surroundings, to render such points unusable by covering them temporarily with leaves, paper, or anything else handy. It should be seen, however, that nothing unnatural appears in the picture.

When young birds out of the nest are used as decoys, a little judicious shifting of their position will often have the effect of bringing the bird eventually to the right spot. We have found, too, that our subject often dislikes any long flight necessary to bring it to the chosen point, probably from the fact that it is not so well able to turn about should it become timid. If a stick or other handy natural object or objects be placed so as to lead by easy stages to the correct position, the wily sitter, feeling a sense of safety in its ability to turn back at any moment, will probably approach closer and closer by these stages until, satisfied by close inspection as to the harmlessness of the apparatus, it will hop unconcernedly across the short intervening space.

The position which the bird itself occupies at the time the plate is exposed is also a very important item. Very few presentable pictures will be obtained at short range if exposures are made in haphazard style directly the bird appears on the selected perch. The photographer must endeavour to carry in his mind the exact position of the dummy on which he focussed, and must restrain his hand until the bird occupies that position. He has also very often to remember that he is viewing the subject at a different angle from that at which the camera views it, and



Striated Tit at nest.

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must make allowances accordingly. Frequently the bird will persist in facing in a wrong direction, either while perched or while sitting on a nest. If one of the party moves slowly round the nest, or if a handkerchief on a stick is moved round instead, the sitter will very often move into the correct position in its endeavour to keep the object in view. This method is specially efficient where it is desired that the position of the head only be altered. The little Brown Flycatcher pictured on page 44 was influenced just in this way.

It will be noticed, on glancing through the illustrations in this book, that the majority of the birds are in a position roughly at right angles to a line drawn from the camera. This position is advisable where possible, as all portions of the bird, being approximately equidistant from the lens, are likely to be correctly focussed. If, for instance, the subject were facing directly towards the camera, most probably either head or tail would be out of focus.

The beginner will find that the quickness of the bird's movements in visiting and leaving the nest will account for the waste of many plates. With nests having the entrance at the side and with nests built at the end of a burrow in the ground, this difficulty may, in a great measure, be overcome by blocking the entrance thereof. Being unable to enter its home, the bird often remains for a considerable time on the spot selected. In other cases a wave of the hand or other movement at the right moment often causes the subject to hesitate for a sufficient length of time.

We have purposely refrained from giving any instruction regarding development and the like. Such information is much better obtained from works by experts. But one or two points suggest themselves as applying particularly to the Nature photographer. We always aim, when developing, at obtaining negatives showing as much contrast as possible. In addition to giving a greater appearance of relief to the print, we think that such negatives make better enlargements, and are more suitable for reproduction. There are ways, moreover, in which soft results may be obtained if desired in prints from hard "contrast" negatives. We therefore continue development of



White-plumed Honeyeater at nest.

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our plates a little longer than is usually considered necessary.

Nature photographers, particularly, will accumulate many negatives, portraying desirable subjects in excellent positions, which are apparently hopeless through some defect. We have discarded a great number of such in our time, and have only recently realised the possibility of improving some of them. As our knowledge of photography has grown, new ways of dealing with failures have suggested themselves. Unless negatives are absolutely hopeless, we advise beginners to put them away just as carefully as they do the good ones. Intensification and reduction we have practised for many years, but avoid it where possible, on account of the danger of damaging the negatives. Nowadays we prefer to experiment upon an enlargement, or upon a duplicate negative obtained from an enlargement, and would advise little in the way of experiment until such time as the photographer possesses an enlarging apparatus of his own.

By far the greatest number of our failures are of that class which show a shadowy image and very little contrast. Direct intensification of the negatives in bad cases has been found of little benefit, but recently we have found that many toners used for prints, notably brown and green, act upon them in exactly the same way as the intensifier acts upon the negative. After toning a weak enlargement alternately in brown and green several times, we have found it to be quite respectably "contrasty," and to produce a good negative when photographed. Of course, such methods are suitable only for persons a little advanced in the art, but our remarks will serve to show the necessity for keeping the apparent failures.

The photograph of the White-plumed Honeyeater reproduced here was taken with the old ten shilling camera away back in 1909. After the negative had been intensified it still showed so little contrast that it was consigned to the "scrap-heap" as soon as we had obtained a few really good pictures. There it remained for several years, and was resurrected only when the experiments above mentioned gave us hope of using it. We were extremely fortunate to be able to improve it, by the way, as several years in an old box subject to periodical drippings from washing troughs left us little hope that we would find it intact.

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Amongst hundreds of negatives we found a few still undamaged and this was one.

There is a large field for interesting and useful work during winter months in enlarging, lantern-slide making, and in the improvement of pictures.

Another little plan we have for passing the months which separate one nesting season from another, is the portraiture of those introduced birds which frequent suburban gardens. Such pictures, to us at any rate, are quite useless when obtained, but provide quite a considerable interest nevertheless. The beginner also may well have some useful practice in this way before operating in the field. These domesticated birds, however, are usually so wary that it is impracticable to sit watching with a thread in one's hand for them to perch in the desired position. We will describe our methods in case any reader should be inclined to try them. We must urge, however, that if the results obtained in this way are ever shown, it be made clear that they do not portray Nature subjects in their natural surroundings.

The necessary outfit for this "back yard" photography cost us about five shillings or so. We purchased a cheap electrical dry battery sufficiently strong to operate an electric bell. A few yards of insulated wire was also necessary. The whole was connected up in a manner which any book on electric bells will describe, and the bell, with the gong removed, was adjusted to drop a weight on contact being made. The weight in turn was adjusted to release the shutter when so dropped. The loose ends of the wire were then fastened in such a way that the weight of a bird on some kind of perch near a drinking tin or on the tin itself brought them together and completed the circuit. With the camera focussed upon the chosen spot, and the apparatus arranged in this way, the sparrows, the doves, or other birds of the garden may be relied upon to take their own portraits, while the photographer is engaged elsewhere. We are satisfied that similar methods could with advantage be employed in dealing with some few unsatisfactory subjects in the wild, and it is our intention to use, later on, a modification of the device described. The male lyre-bird, we think, may be photographed in this way more surely than in any other.

In England and in other countries bird photographers



Mistletoe Bird (female) feeding young.

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almost invariably use some form of hiding arrangement in which both camera and operator are concealed while photographing wild birds. We ourselves have not used anything of this kind so far, but are able to see clearly that such a system would be extremely helpful in certain cases. Probably the reasons which have operated against its use, so far as we are concerned, are the cost of making a "hide" which could be always carried, and, alternatively, the length of time required to improvise one on the spot. The system has recently been given a trial by Mr. Les. Chandler, one of the foremost Nature photographers in Australia. The fact that he speaks of it in glowing terms is sufficient proof of its efficiency.

In the foregoing pages we have set down at length the method by which our pictures have been obtained. We have withheld nothing which has appealed to us as likely to be useful to a beginner. It is our hope there will be a sufficient number of such beginners to render it probable that some at least of the methods we have described will prove helpful. Of one thing we feel satisfied—a majority of those readers who find interest in this book will have some popular misconceptions of bird-photography dispelled. Almost without exception, friends (many of them photographers of experience) who have seen our pictures, had previously held a decided conviction that this class of work was possible only to the expert photographer with an expensive apparatus.

The remarks of friends prompt us to mention another matter. Many who see such pictures as that reproduced on page 54, which depicts an adult bird perched on the photographer's hand, express either back-handedly or straight-forwardly, a doubt as to their genuineness. Perhaps our friends, because they are friends, are at a little disadvantage in this direction as compared with the reader, who knows us not. Nevertheless, we here give the assurance that every bird pictured in these pages was a wild one, and was taken in its natural surroundings. Further, except in one case, any trustfulness evident from the photograph is no more remarkable than that which will be experienced by any observer who spends in the bush the same amount of time as we have done. The exception referred to is that of the Laughing Jackass, shown on page 100. This bird, though

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wild, was more easily dealt with than usual on account of the prolonged and kindly action of certain residents at Upper Ferntree Gully, who provided for this and other Jackasses free meals at the back doors of their residences. It was while feeding these birds, as the residents were wont to do, that we were able to take the photograph.

Out of the doubts previously mentioned peeps a little motto for beginners. "Never descend to taking pictures of subjects which are not entirely natural." Photographs of long-departed stuffed specimens or of birds in captivity are right enough so long as they purport to be nothing more, but to attempt to make such material into a Nature picture is to throw to the winds any claim to praise for other and genuine photographs, as well as to rob one's own mind of the satisfaction resulting from a hard-earned victory. Quite apart from this phase of the question, observers who have had years of experience in the bush will soon pick out points which will convince them that the picture is a fake. You can imagine that such observers will naturally look with suspicion on the whole of such a photographer's work. A little incident will illustrate this. One Sunday afternoon a few years back we visited the home of a cage-bird enthusiast to see her birds. Subsequently we were shown some post-cards and expressed our surprise at seeing amongst them a rare bird-picture which had made one photographer famous. "Oh, yes!" said the lady, "that was my bird, and Mr. ——— took his photo, in that gum-tree by the back door."

Since that time, photographs from the same source have appealed to us little. No! If the photographer wishes to maintain a good name he must deserve it, and the smallest circumstance connected with any picture which makes it anything but absolutely natural, should be explained whenever and wherever the photograph is shown or reproduced. So particular are we in these directions, that we will not even take a photograph of a nest from which the young birds have flown.

There is another direction in which the photographer must exercise care, and a most extreme and never-failing care at that. The greatest advantage of a Nature photograph lies in its power to convey the likeness of the subject without the loss of life or liberty occasioned by other methods. A collection of well-mounted specimens in a



Yellow-breasted Robin on nest.

BIRDS OF OUR BUSH

museum is beautiful in a way. To us, however, the realisation that the tiny lives, which bounded within those pitiful balls of feathers, were ended without warning, possibly in the midst of a song of gladness or in a feverish search for the means of sustaining those hungry hopes in a nest near by, saddens the whole display and makes the dead feathers appear more mournful still. There is a sadder phase than that exemplified by a museum display. The great collections of shapeless unmounted skins amongst which many scientific ornithologists grope in an endeavour to out-vie each other in finding differences between birds which, from a common-sense point of view, are identical, appears to us to point to a defect in our laws which needs remedying.

We urge the beginner, therefore, to realise this advantage of photography and to use all means in his power to prevent any loss of life through his agency. The pictures we have been able to produce, we are proud to say, have cost not a single life so far as we know. Let every photographer set himself a similar ideal. To accomplish this end it is often necessary to go to such trouble as to remove the camera for a time in order that young birds may be fed or that eggs may be kept warm. Often, in fact, it means losing altogether the chance of obtaining a much-desired picture. If young birds be caught and tethered as decoys, the photographer should use wool or some other soft material, and be ever on the lookout that the fledglings do not injure themselves.

In the vastness of our country there is usually little need to ask permission to go where one wishes. In the outer suburbs, however, it often becomes necessary for the photographer to trespass slightly on what is regarded as private property. By far the better plan on such occasions is to ask the owner's permission (which in our experience, will never be refused), or at least to be very careful that no damage is done which may reasonably incite the property-holder's anger. We had a useful little lesson in this direction away back in our early experience. We discovered a family of White-fronted Chats feeding their young in a partly-cut oat crop. In the excitement of capturing the lively young birds both of us ran, at different points, through a narrow strip of crop. The owner quickly arrived. With pardonable anger, and in unpardonable language, he besought us to begone. Ominous brandishing



Photographing the Rufous Fantail.

BIRDS OF OUR BUSH

of a pitch-fork lent colour to his already lurid demands, and the chance of a picture was sorrowfully left behind. We might explain that, although the Chat is a very common bird, it is not at all easy to photograph, and an instance such as this, where the parents appeared trustful, was a discovery indeed. We have always been most careful since that no damage is done, and that anything temporarily removed is replaced.

In the following chapters we hope to cater for those readers who may not be disposed towards photography, and also, perhaps, give further help to those who may be, by recording something of the habits and habitat of those birds, mainly well-known, with which we have become acquainted.

PART II.

Suburban Birds



Mistletoe Bird (female) cleaning nest.

CHAPTER IV.

BEGINNERS' SUBJECTS.

THE person who wishes to study Nature—photographically or otherwise—and whose lack of opportunity or means limits his operations to the suburbs of one of our cities, is prone to take the view that his ambitions, as a Nature student, cannot be realised. Nothing could be further from the true position. The outer suburbs form an ideal training ground for the beginner, and quite a sufficient number and variety of birds will be found there to keep a photographer busy for a considerable time. Little expenditure is involved, moreover, in reaching the scene of operations, which is a decided advantage during the period when wasted plates will be numerous. It is quite bad enough to waste plates without wasting railway fares as well.

In the year 1909, at the age of about sixteen years, we set out with a vast amount of confidence, a total lack of experience, and apparatus of the most primitive kind, to photograph the native birds to be found on the outskirts of the suburb of Preston, not more than seven miles from the heart of Melbourne. We really expected to complete the job in a few weeks, and then to work further afield in the direction of Greensborough and Eltham. In actual practice it was about two years later that we first felt justified in an extension of our field of effort—even then we left the suburban birds sadly unfinished. We had reckoned without the inevitable difficulties which beset the bird-photographer, and without those additional ones arising out of the use of an unsuitable apparatus.

BIRDS OF OUR BUSH

Our first exploit was an attempt to photograph the nest of a Tom-tit which was built in a furze hedge not very far from our own homes. We set up the camera on a rough tripod of palings (to purchase a tripod was beyond our means), and made several exposures from a distance of about eighteen inches. This done, we marched home in blissful ignorance of our fortune—misfortune it happened to be. We were quickly enlightened, but even then attributed the appearance of shapeless light and shadow on the negative to anything rather than the correct cause. The plates, in our opinions, were certainly defective.

We may here assure the beginner, after some years of experience, that defects in the plates are the least likely cause of mysterious failures. However, our next attempt, which should have shown an adult Tom-tit at the nest, was a repetition of the previous failure, and our disappointment was keen. It was at this stage that we decided to take the commonsense course, and investigated thoroughly the working of our machine. With the aid of a piece of tissue-paper pasted to a blank plate, which served as a focussing screen, we soon found that our apparatus, used normally, was suitable for photographing objects only at a distance of six feet or more. Hence our failures. We also found, however, that as the size of the aperture admitting the light was reduced, so could the camera be moved closer to the subject. Acting on this discovery, we succeeded in obtaining pictures of nests and other still subjects by using an aperture about the size of a pin's head and making exposures up to seven minutes. Photography of birds—our real objective—still eluded us.

Further experiments with the tissue paper revealed the fact that the greater the distance separating the lens from the plate, the nearer could the camera be placed to the subject. We thereupon invented a contrivance by means of which the plate was held against the back door of the camera, a couple of inches further from the lens than its normal position. This threw objects at a distance of twenty inches into sharp focus upon the plate without requiring a small aperture. It, however, restricted our operations to one exposure per day. With the camera arranged in this way we achieved a certain amount of success. Just how far we succeeded may be judged by the reader after he has examined the photographs of a Straw-

BEGINNERS' SUBJECTS

necked Ibis appearing on page 111, of White-browed Wood Swallows on page 151, and of a Yellow-faced Honeyeater on page 154.

By drawing attention to the results obtained with a very old and cheap camera, we may have caused a misapprehension in the minds of some of our readers. Notwithstanding the results shown, we must again make it clear that a magazine camera is quite unsuitable for bird photography, and there are probably few persons sufficiently interested to persevere against the attendant difficulties as we did. The object of this chapter is rather to show what may be accomplished by the exercise of some ingenuity and patience, and to awaken the beginner to a realisation of the fact that there will surely be a bountiful harvest of disappointments at first. This is our chief reason for recommending the suburbs as a training ground for the city-dwelling enthusiast. Had we followed our inclination, born of overconfidence, and commenced operations further from home, either one of two things would probably have happened. Either our interest in a hobby, entailing such frequent disappointments after long journeys, would have flagged, or we would have found our expenses too heavy to allow us to continue.



Tom-tit near nest.

CHAPTER V.

TOM-TIT, CHAT, AND BLUE WREN.

THE suburban bird we select for first mention is the Tom-tit, and the reason is two-fold. Firstly, it is the native bird which, as a rule, first meets one during a ramble along suburban hedges. In the second place our very first attempts at bird-photography were inflicted upon a pair of these birds which had built their nest within half-a-mile of the main street of Preston. We have no pictorial record of these experiences, for the very good reasons set out in the previous chapter. It speaks volumes, however, for the difficulty of obtaining pictures of this and other species building near the home of man, that it was several seasons later, and after many attempts, that the measure of success indicated by the accompanying picture was attained. However, our efforts were well rewarded, as we regard the photograph as being amongst our very best.

The Yellow-tailed Tit-Warbler, to give it its official title, is well known to all who lead an outdoor life. It inhabits the bush as well as the suburbs, and its sweet, lively notes are unmistakable when once heard. It is a uniform grey little bird, the soberness of whose colouring is relieved only by a patch of bright yellow feathers at the base of the tail. Even this enlivening touch is hardly noticeable, except during flight. The Tom-tit has a very near cousin which inhabits similar country, but which is not found as a rule so close to dwellings. Some points of difference between the two species will be apparent on comparison of the photograph reproduced here with

BIRDS OF OUR BUSH

that of the Buff-tailed Tit on page 137. For a considerable time we were unaware of the presence of two different species, although we must certainly have found nests of both. Two further points of variation, not apparent in the pictures, are the slight difference in colour of the tail patches and the less sweet and more metallic note of the Buff-tailed species. The Tom-tit is entirely insectivorous, and hunts over the ground in small flocks of half-a-dozen or so. During the nesting season, however, each pair follows that natural inclination of most birds to possess a little territory of its own.

The bird photographed had its cumbersome nest tucked snugly away in an isolated and thickly-grown furze bush near the Darebin Creek. Numerous attempts to photograph the owners of other nests did not provide us with much ground for hope of success, and the early August wind and weather did their best to make our task more difficult. Happily, the nest contained young ones but recently hatched, and under such circumstances most birds become unusually daring. Still, it was only after quite an hour of indecision and after camera and tripod had blown over about six times that our "subjects" condescended to "sit." Just how many times during this period we succeeded in counting the regulation number before speaking the angry word, we do not now remember. Photography on a windy day is most exasperating. The result in this case appears calm enough, but the camera has lied. It was impossible even to hold the nest and surrounding spurs tolerably still with the aid of string. The spur on which the bird is standing danced in and out of the picture in fine style, and it was indeed fortunate that it occupied such a satisfactory position at the moment of the exposure.

It often happens that the absorbing interest of some subject near at hand is overlooked on account of its very familiarity. The habits of the Tom-tit are an instance of such a state of affairs. So far as we know, no ornithologist has devoted any considerable time to this commonplace little bird, notwithstanding the fact that there are many unexplained peculiarities in its habits. Many people know the cumbersome and untidy, though cosy, nest of the species, yet few have made any serious attempt to account for the presence of the open structure almost invariably



White-fronted Chat (female) at nest.

BIRDS OF OUR BUSH

found on top of the egg-chamber. For the benefit of those who do not already know the nest, it may be as well to describe it, as we are unable to reproduce a photograph of it. The nest proper is a roughly spherical structure, entirely closed in except for a small entrance in the side. This portion is warmly lined with feathers and the like, quite calculated to provide shelter and warmth during the rough weather which it usually encounters. The peculiarity of the nest lies in the fact that on the top of the egg-chamber will usually be found a shallow open shelter not unlike the cup-shaped nest built by such a number of birds. The occurrence of this open shelter is no accident either, as is proved by the fact that where circumstances have prevented its being built on top of the egg-chamber, we have found it to be placed separately a few inches from the main structure.

What particular purpose this second nest serves is difficult to determine. One explanation offered is that the Tom-tit hopes by its presence to induce the Cuckoo to place there its unwelcome egg instead of in the nest proper. We find ourselves unable to incline to this view, as we have never yet come across a case where this object had been accomplished, and, furthermore, have heard of few being recorded. It is unlikely that the bird would persist in the erection of a structure which experience proved to be useless. Our idea, certainly not backed by any definite proof, is that the second nest is used by the non-sitting bird as a shelter during the night. It has the appearance of being tenanted, and does not become dilapidated as would appear inevitable if it were not in use and kept in repair. There is one other possible explanation which occurs to us as a result of some experience of cage birds. Certain well-known Australian Grass Finches we have noticed to construct a small open shelter when their young are advancing towards the flying stage. The young Finches, when they leave the nest, are nightly enticed by the careful parents into this shelter. Possibly the structure built by the Tom-tit is intended for a similar purpose.

The Tom-tit is an early builder. Nearly always it is the first nest we find, and may be looked for about the middle of the month of June. Nests as late as Christmas time are by no means uncommon either, but July, August, and September are the principal breeding months.



White-fronted Chat (male).

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The eggs, usually three or four, are small and white, sometimes with a few faint pink specks at the larger end. The young birds, when hatched, grow slowly, and remain in the nest for between three and four weeks. This is considerably longer than is the case with most small birds. When they do at last leave home, they are well grown and are strong fliers.

Feeding in company with the Tom-tit, and building its nest in the same furze hedges, will be found a small bird quite as dainty and almost as common. The White-fronted Chat, or "Tang," as we always knew it in our young days, was also favoured with many of our early efforts. Its shadowy resemblance on a very much under-exposed plate was the first gleam of success in our photography exploits. Like the Tom-tit, the Chat has given us a great deal of trouble, and it was after many seasons that the two photographs reproduced were obtained. While on a visit to Meredith in 1913 we located a nest in a furze bush on the banks of a small creek near the township. As the birds appeared slightly more trustful than the general run of Chats, we decided to give them a trial. After a considerable time spent in a cramped position in the branches of a neighbouring wattle tree, we were able to expose a few plates while the male bird stood at the nest. The female kept well in the background while the male took the risk. We must absolve the gentler sex from the charge of cowardice by saying that the female is usually more daring than the male. The picture of the male reproduced is the result of this series of exposures. The photograph is not all it might have been as regards sharpness, but the position caught by the camera suits the bird admirably. The little white front, which accounts for the name "Nun" frequently applied to the bird, is quite clearly shown. The picture of the female was obtained some time later at Preston, and also after a considerable exercise of patience.

The Chat, like several other species of birds, frequently feigns injury in the hope of leading the intruder away from its nest of young. This ruse is carried out so well that it must be an efficient safeguard against natural enemies at least. More than once, in fact, in the confusion caused by the sudden disturbance of a family of Chats we



Blue Wren (male) in characteristic attitude.

BIRDS OF OUR BUSH

have, for a time, followed the apparently helpless parents instead of the genuinely helpless young birds.

Chats' nests are very common during July and August in the open paddocks along the Darebin Creek, where furze and other small bushes are popular nesting sites. The eggs are small and in colour pearly white, dotted sparsely with reddish brown, principally at the broad end. Quite often the spots develop into blotches of considerable size, and eggs of this kind are very pretty.

The Blue Wren pictures appearing in this book were, with one exception, obtained in the suburb referred to. Our experience with the Blue Wrens is probably greater than with any other species. In fact, our practice of falling back on this and a few other favourite birds to compensate for failures elsewhere, has often drawn forth an accusation of wastefulness. However, we have always been perfectly satisfied to add to our records of this little fellow when there has been a dearth of other subjects.

There are quite a number of interesting points about the habits of this energetic creature, and, while our time has been primarily devoted to obtaining pictures, still we have endeavoured to devote some thought to an explanation of their ways.

One serious accusation made against the male bird—unfortunate male—is that his inclinations are distinctly mormon, and that he contravenes all the laws of righteousness by indulging in quite a number of wives. We are convinced, as a result of our observations, that the practice does not exist—not, at any rate, to anything like the extent claimed. The apparent preponderance of females over males can, we think, be accounted for in either or in both of two ways. We have found the Blue Wren to differ from many other birds in the fact that the advent of the nesting season and its attendant responsibilities does not seriously affect the sociability usually shown between members of the species. They move about, fight and feed together just as before, although their nests are invariably placed at a little distance apart.

It is this sociability of one or other of the birds with its neighbours during the time when its mate is necessarily engaged elsewhere, that accounts for the slander on the Wren's character. On almost every occasion that we have attempted to photograph a Wren



Blue Wren (female).

BIRDS OF OUR BUSH

there have been more than two birds intensely interested in the proceedings. Oftentimes there have been half-a-dozen, and the issue has become so clouded that it has been extremely difficult to determine which birds were the actual owners of the nest or young. An investigation after the excitement has abated, however, has usually revealed a sufficient number of nests to account for the full number of birds. The excitement, moreover, prevails equally at each nest that is disturbed. Wren neighbours, on the occurrence of anything unusual in the neighbourhood, are wont to turn out in force, crane their necks, and make plenty of noise.

Certainly, we have noticed more than once, later in the season, a spare female or two, but their position is probably accounted for by the presence of grown-up young birds of a previous clutch of eggs. We have had proof of this theory in one instance at any rate. In a little patch of garden at the Old Treasury Building, Melbourne, a pair of Wrens built four nests and reared four broods during the year 1918. The same material served in each instance, but a new position was chosen for each nest. All four were built within twenty or thirty feet of perhaps the busiest tram line in Melbourne. After the first brood had left the nest and had been shown round the grounds for a week or so by both parents, the female again built a nest and incubated a further clutch of eggs. The young birds were handed over to the male while the female built the third nest. During the time the last two broods were being reared, we watched carefully. The young of the first nest quickly grew to resemble the mother, and the fact of two or three of his growing children accompanying the male was certainly apt to create a false impression on the mind of the stranger. So much of the nature of their mother did these young birds inherit that they took their share, along with the parents, of the work of feeding the youngsters in the last nest. In fact, it was impossible to say which of the brown birds was the original female. We are quite satisfied, now, that the few cases of apparent polygamy we had previously encountered are fully explained.

It is also believed with regard to the Blue Wren that the male, during the winter months, dispenses with his bright colour, and assumes the quiet brown plumage of his spouse. This view we believe to be correct; otherwise it



Blue Wren (male).

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is difficult to account for the almost total absence of coloured birds during the winter.

A glance through our Wren pictures would at once show that in very few cases are they taken at the nest. One thing that the photographer learns very quickly is any peculiarity of his subject which serves his ends in obtaining pictures. We soon discovered that the excitable nature of the Wren provided the best influence for inducing it to face the camera. The few cases in which we have chosen a nest as the basis of operations have yielded results very far from satisfactory. Latterly we have always endeavoured to capture young birds which have recently left home and to train the camera on some point, a convenient stone or stump, near which the noisy young ones are temporarily imprisoned. Under such circumstances the presence of the camera is entirely disregarded in the excitement. The extreme rapidity of the bird's movements, however, leaves the photographer little time for dreaming if he would catch it in the position he desires. Often he will find that, by the time his decision to make an exposure is communicated to his hand and by the thread from his hand to the shutter, the bird has taken wing and appears as a blur half-way off the plate. For this reason it is advisable, where possible, to dispense with the thread and to operate the shutter with the finger.

At a nest containing eggs only, photography is quite often a very slow process. It is often possible on such occasions to cheat the birds into excitement by imitating the cries of young birds. Quite unconscious, apparently, of the fact that these sounds are unlikely to emanate from a nest of eggs, the birds, females in particular, take on a characteristic mouse-like attitude, raising their feathers, and running along the ground in evident distress. This attitude is conveyed somewhat by the picture appearing on page 73.

The Blue Wren is a vivacious little creature at any time, but seen at close quarters on a sunny day, the sheen and glitter of the dark and light blue coat of the male leaves little to be desired in the way of beauty. The plumage of the female shows no sign of the bright blue of the male. She is brown in general appearance, ashy grey beneath, while a patch of bright chestnut appears round each eye. Quite possibly many casual observers have seen

TOM-TIT, CHAT, AND BLUE WREN

the Blue Wren at a distance of a few yards, and while they may agree that the male has a certain claim to be called beautiful, they would contend that the female has little or none. We would advise such persons, if any there be, before judging the beauty of either male or female, first to see it properly. That is to say, see the live birds in the wild state at a distance of two feet or less. Then, and then only, will their beauty become apparent.

In case any should take this little piece of advice seriously, as we certainly intend it, we may add that the Darebin Creek, a couple of miles direct east of the Preston Reservoir Railway Station, is one of their favourite breeding grounds, and that nests may be found there in plenty during the period from the beginning of October to the end of December.

The Wren's nest is a comfortable structure built of grasses and lined with soft feathers and the like. It is dome-shaped with the entrance in the side, although in many cases, perhaps on account of the warmth of the weather at its nesting time, having the entrance side almost wholly open. The Wren never builds high above the ground—almost on it as a rule. Small bushes, shrubs, fallen branches, or even coarse grass are availed of.

The eggs, usually three or four in number, are small and white, minutely freckled, particularly at the broad end, with light reddish-brown.



Nest of Brown Tit.

CHAPTER VI.

CREEK LOVERS AND OTHERS.

THE White-browed Scrub Wren and the Brown Tit are two inhabitants of the creek-bank undergrowth, whether it be in the suburban area or further afield. Curiously enough, either by accident or by some real affinity between the species, we have usually found the two nesting close to each other. Certain of their call-notes, also, are not dissimilar, and for these reasons the species are always associated in our minds. When one seeks their homes, however, a point of difference at once arises. The Brown Tit builds in a position chosen apparently at random, and showing little desire for concealment. The Scrub Wren, on the other hand, is most artful in this matter, and more than once have we spent a considerable time searching the damp undergrowth for a nest, the position of which we knew to within a few inches. In appearance the birds are very little alike. The Brown Tit is much the smaller. Its general colour is olive-brown, shading to a warm rufous brown towards the base of the tail. Its breast is a lighter shade of grey streaked conspicuously with darker markings. The "Brownie," as we usually name it, feeds on insects, mostly in small saplings, and in the higher branches of small shrubs. It is never at rest.

Notwithstanding rather confiding ways under ordinary circumstances, we have never found the bird a particularly easy subject photographically. The few pictures we have been able to obtain have cost us considerable time and trouble. The main feature of its resistance to the photo-

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grapher lies in its persistence, tenacity, pig-headedness, or whatever it may best be called. Seldom indeed will the bird refuse to visit its nest in the face of the camera, but when it becomes necessary for it to perch on one particular point the trouble begins. A photographer who works at a greater distance than we do, will probably find much less difficulty.

The bird whose nest is pictured possessed the quality of persistence to quite the usual degree. For several hours all attempts to induce it to perch on a piece of stick were vain. Covering with leaves all other perches in the vicinity, and other ruses often used with success, had no effect. The bird would approach from behind the nest, and in no other way. A photograph was at length obtained by sheer patience. We placed a wad of grass in the entrance of the nest, removed all other obstructions and simply waited. After a time—a very considerable time—our subject evidently forgot our presence and hopped on to our selected perch. Unfortunately the negative obtained was lent and cannot now be found.

We have noticed the persistence of the Brown Tit at all times, whether faced with a camera or not. At the Plenty River, Greensborough, we watched on one occasion for quite half-an-hour a trial of patience between one of these birds and a White-naped Honeyeater, both of which had nests close by. The "Brownie" was intent upon securing for its home a large piece of downy substance from a shrub quite close handy. The Honeyeater's nest was on the other side of the river, much further away, yet the Honeyeater, with its swift flight and characteristic pugnacity, was able to foil each attempt of the smaller bird to dislodge the coveted material.

Honeyeaters, generally, are great bullies, and this one appeared to have no other object in attacking the smaller bird than persecution, pure and simple. It was amusing to notice the tactics of the Brown Tit. It would fly from its nest quite unconcernedly in a direction exactly opposite to that in which the material lay, and would double back quietly and slowly till within a few feet of its goal. A bold rush from the nearest cover was inevitably countered by the swooping flight of the Honeyeater to the spot, before the material could be dislodged. Several times it seemed that the smaller bird was about to succeed—that the Honey-



Nest of White-browed Scrub Wren.

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eater had tarried too long—but no! Except on one occasion when “Brownie” carried a very small portion triumphantly home the material remained where it was. What would have been the ultimate result we know not. Our sympathies were wholly with the smaller bird, and, before leaving the spot, we played the bully with the larger by climbing to its nest and generally harassing it while the disputed material was eagerly transferred in large sections to the interior of “Brownie’s” home.

Like quite a number of our small soberly coloured birds the Brown Tit does not appear beautiful unless seen at close quarters. In fact, we advise any person who is unable to realise any beauty in such birds to reserve judgment until they have seen them at a distance measured in inches and not in yards. We hope that in some measure our illustrations may provide such a ground for judgment, but it must be remembered that the two great attributes of movement and colour are missing therefrom.

The Brown Tit is an early builder, and nests may be found in August and even before. Description of its home is not needed when we may simply refer the reader to the picture on page 82. The nest is usually built near the ground, in some bush or shrub, or even in tall rank grass. Inside, the home is cosily lined with feathers, down, or other soft material. The appearance of spiders’ cocoons on the nests of this and many other species of birds has, so far as we know, not yet been satisfactorily explained. One or two of them will be noticed in the picture referred to. They may be for ornament or they may be intended to assist in the concealment of the nest. The latter suggests itself as the more likely explanation. The war has taught many lessons as to the efficiency of camouflage, the fundamental idea of which appears to be the avoidance of a mass of material similarly coloured. Quite possibly these creatures of our bush were acquainted with the efficiency of camouflage of a kind for long centuries before man learned it, whether from them eventually or not, we cannot say. It does, however, appear to us likely that this habit of adorning their nests may arise from the necessity, for small birds at least, to deceive the eyes of natural enemies. To our intellects these attempts may appear useless and inefficient, but it must be remembered that we are neither the original nor the only enemies with



White-browed Scrub Wren approaching nest.

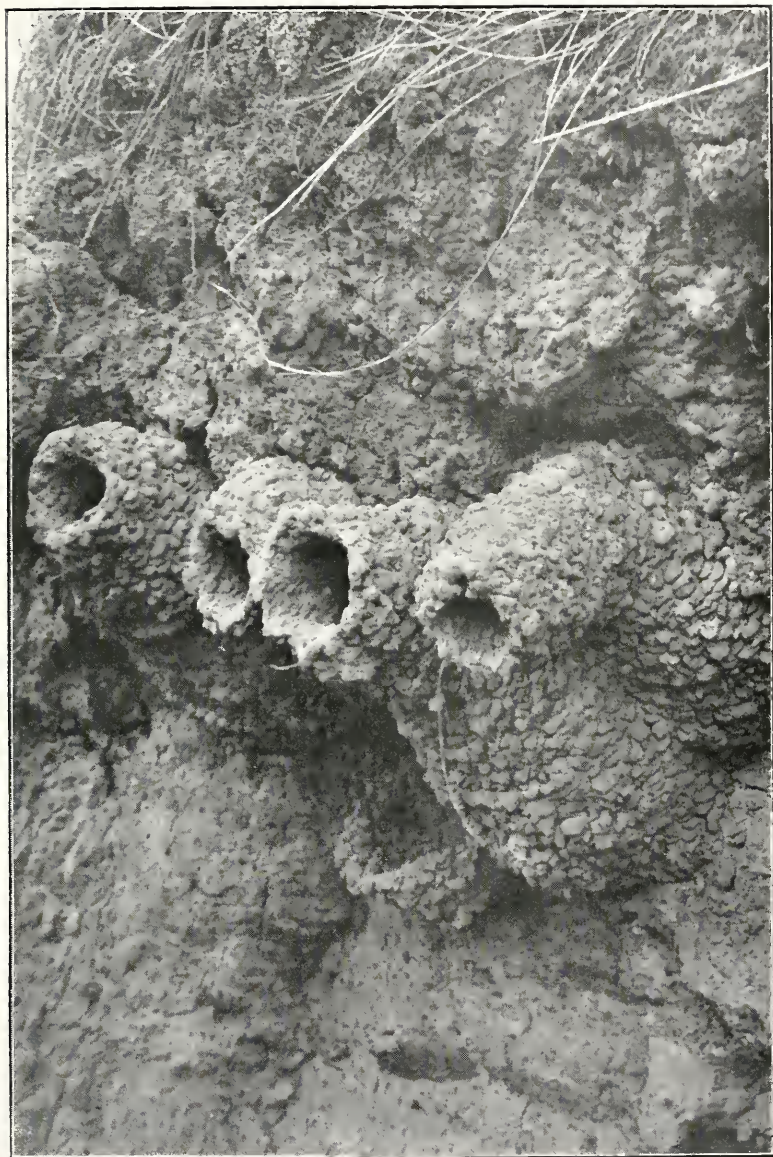
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which these creatures have to contend. In any case, no one with experience will deny that many of these aids to concealment adopted by the birds are decidedly efficient even where man—or perhaps boy—is concerned. It is more than likely, therefore, that such habits, though they may fail so far as human beings are concerned, are a decided protection against natural enemies. Almost every nest illustrated in these pages will show some signs of adornment.

The eggs of the Brown Tit are small—a white ground, minutely freckled with red. The usual clutch is three.

The White-browed Scrub Wren is easily recognised and distinguished from its neighbour, the “Brownie,” by its quiet and unobtrusive progress through the creek-side undergrowth. It is when one sits motionless and silent in such a locality that one is most likely to obtain a good view of the bird. In colour it is a warm brown, which harmonises well with the darkness of the undergrowth. A faint white eyebrow and two or three small white marks on the wings are the only relief to its sombre colouring. Both these markings are clearly visible in the picture reproduced on page 85, and the characteristic attitude of energy and alertness is also well depicted.

Notwithstanding its exceeding cunning in concealing its home the Scrub Wren is not, as a rule, a difficult bird to observe and photograph. A nest with eggs or young is usually sufficient inducement to bring the bird into any position desired. In fact on such occasions, but for its continual scolding, it does not appear to take any notice of the camera or of the intruder. The Darebin Creek provides plenty of cover for this species, and we have had opportunities, on three or four occasions, of exposing plates as the parents fed their young in the nest. The bird pictured on page 85 was so trustful that we were able to make exposures without moving at all from the camera. We were, in fact, able to adjust the focussing screw while the bird was in the desired position. The amount of movement necessary to accomplish this is considerable, and constitutes, at the distance of eighteen inches, a severe strain upon the trustfulness of any bird. The nest in this instance was built cunningly under the lower leaves of a large thistle-like plant, which we have always called (incorrectly, we believe) an “artichoke.” The parents had made



Nests of Fairy Martin.

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several visits with food while we watched, and we had traced their movements almost exactly; still it was some time before we could locate the nest.

The nest shown in the picture on page 83, was built with much less attempt at concealment than is usually the case, but there was some surrounding growth which had to be parted somewhat to allow of a clear view. It is a typical nest, being built of coarse grasses and lined warmly with feathers. Very often rabbit fur is used as a lining. One nest we discovered at Eltham some years ago was built externally of skeleton leaves. It made an extremely pretty picture.

The Scrub Wren also is an early builder. We have frequently found nests before the end of July, and have seldom seen them later than the end of September. The eggs, usually three in number, are rather larger than the size of the bird would lead one to expect. They are of a white ground colour, very densely covered with small purple-red specks, often so densely speckled as to have the appearance of being wholly red.

The truth of our remarks regarding the interest of bird observation at close quarters as against more distant observation is clearly demonstrated in the picture of a Ground Lark, or Pipit, which appears on page 89. The photograph, in many ways, is not a good one, but the mere fact that it is almost an impossibility to view a live Ground Lark in the wild state at close range, renders the details of plumage apparent in the picture quite a surprise to the observer. The protective coloration of these ground-building birds was a factor operating against success in this case, but our greatest difficulty lay in the universal wariness of the species. The casual observer may not agree that the Ground Lark is a wary bird. In our boyhood, certainly, we did not experience any difficulty in locating its nest, because, like most other species protectively coloured, it does not rise until the intruder is within a couple of feet of it. The real test of wariness commences, however, when a camera or something else unusual is placed near its home, and the bird is invited to carry out its ordinary duties. Under this test we guarantee that any observer will find the Ground Lark as wary as he wishes. It is a certainty that this picture would never have been obtained had it not been that the nest contained very young chicks which, the parent



Pipit, nest and young.

BIRDS OF OUR BUSH

knew, could not be left exposed to the glare of the summer sun for any length of time.

Some little idea of the difficulties overcome when this picture was made, may be obtained from the fact that the exposure was effected from a distance of more than two hundred feet, where the operator was concealed in the bed of a dry creek. He had not the slightest idea as to the position of the bird when the shutter was released, and simply judged that, by that time, the parent would be sheltering her young. Apparently she was just in the act of leaving the nest. Possibly she had been startled by the movement of the cotton, from the operator's hand amongst the grass. It was a fortunate picture, in any case, and the turn of the head in the direction of the camera was most opportune. The newly-hatched young — protectively coloured also with long grey down—may be seen in the nest. The Ground Lark is a common brown and grey bird well known everywhere. It builds a small round nest of grasses in a depression in the ground, and lays three stone-coloured eggs, marked with numerous spots of dark brown. The life history of the Pipit exemplifies protective coloration. The adult bird is protectively coloured, and, especially when sitting, makes the best use of this protection by remaining still. Its nest is built with due regard to the colour of the surroundings, and the eggs harmonise also. The young birds, when hatched, instead of being naked and bare like most young birds, are covered with a long down of neutral grey. Thus Nature, in her wisdom, protects the Ground Lark against its enemies from infancy onwards.

The suburb of Preston, like most outer suburbs of Melbourne, has a running creek within its boundaries, and such places always have a particular attraction for certain birds. Perhaps the actual creek bird best known to the ordinary observer is the Reed Warbler, a handsome, sprightly bird, noisy yet capable of a pleasant song. The Darebin Creek is well overgrown in parts with reeds which provide excellent cover for the wonderful nests of this species.

Our experience of the bird has been considerable, and it is a matter of sincere regret to us that, so far, our collection does not contain any picture of the adult bird. Photographs of young birds we might have had in plenty had it



Nest and eggs of Reed Warbler.

BIRDS OF OUR BUSH

not been for the fact that our anxiety to picture the adult birds left little time for photographing the young ones.

Now that we come to set down our experiences in writing, we have cause to regret many lost opportunities. Certainly we appreciate our pictures of adult birds the better because of their rarity, and because of the difficulties attendant on obtaining them, still we have failed to make complete our record of the life history of many of our subjects when we might have done so. We have to be content to draw attention to the picture appearing on page 91, which is a fair representation of the home of this species. A glance will be sufficient to convince the reader that the Reed Warbler is an architect of no mean skill. The manner in which the structure is built on to three or four swaying reed stems is clever indeed. The bowl of the nest is usually deep, and so holds the eggs safely when the reeds encounter a strong wind. The interior is lined with fine grass and rootlets, and the eggs, three or four in number, are of a light stone ground, heavily blotched with darker stone and purple markings.

The absence of photographs of this bird from our collection does not indicate any lack of trying. More than once these inhabitants of the Darebin Creek have been disturbed from their domestic duties for a few hours while we stood, knee-deep in water, carefully focussing the camera on the swaying nest. Our only result has been several severe colds. It is probable, however, that the rough treatment these birds experience from boys, because of the ease with which their nests may be located, accounts for their wariness in this particular district.

Our lack of success with the Reed Warbler has been, to some extent, compensated for by our undoubted success with its near neighbour, the Little Grass Bird, which is as little known as the Reed Warbler is familiar. There are few pictures of the Grass Bird published, and here again we did not take full advantage of our opportunities. Most certainly we could, in addition to securing pictures of the adult birds, have obtained a fine series depicting the nest, the eggs, and the young birds, as well. With our usual thirst for the uncommon pictures, the quite necessary, though simpler ones, were forgotten. The success we did attain, however, was hardly won, and we are quite able to under-



Spotted Pardalote (female) near nesting burrow.

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stand the comparative rarity of genuine pictures of the species.

This little bird is protected by Nature in many ways, and fairly effectively, too. It is protectively coloured, it is a ventriloquist of no mean order, and, not deeming these means of protection sufficient, is a very shy and wary bird as well. It is small wonder that we had long speculated as to the origin of its mournful whistle before we caught a glimpse of the quiet little brown owner as it flitted noiselessly from one bed of reeds to another. In 1912 we first made an investigation of the elusive note, which, though quite full and distinct, we could not definitely trace to any particular portion of the reed beds. We sat in the cover of some bushes and waited. After a time we had several glimpses of the birds as they moved across the open spaces, but a long and diligent search failed to disclose any sign of that which we sought. A little later on, however, we did locate the remains of an old nest, which helped materially in our search the following season.

Before nesting commenced in November of the next year we were able to obtain answers from the birds to our imitations of their call. In fact, they several times showed a considerable degree of curiosity as to their new neighbours. Later, when they had settled down to the serious business of nest building, they wisely refrained from any conversation with strangers. It was useless for us to attempt a search of the whole of the great beds of reeds and rushes in the vicinity, so we again adopted waiting tactics and watched. We soon caught several glimpses of our subjects fluttering quietly to and fro. After somewhat over an hour spent thus, we arrived at the conclusion that their home was in a small strip of rushes directly in front of us. By a diligent search through water well over our boot tops we at length located it just as we had begun to doubt the correctness of our judgment. It was an untidy structure which, nevertheless, harmonised so well with the rushes that it escaped notice until we conceived the idea of looking through the rushes for a dark spot against the background of water. Rushes and grasses were used in its external construction, but the inside was lined cosily and carefully with feathers. Some nests of the species are built with a hood of the same material forming a roof over the eggs; but this one, as well as three others we have



Grass Bird with insects.

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seen, were simple cup-shaped structures. It contained three eggs, flesh-coloured, and very closely marked with small red spots.

Misfortune disfavoured our attempt a couple of weeks later to obtain pictures. All we succeeded in getting was a ducking.

The following year we located another nest in the same locality. The three young birds which it contained were so well advanced that they slipped silently into the rushes before we had time to anticipate their intention. That there should be a great deal of difficulty in capturing young birds but two minutes after they had left the nest, and in a reed bed of small dimensions, may be difficult for the reader to realise. We would not have been able to realise it either had we not experienced it. Even at this early age the young birds had developed all the artfulness of their parents, and it was not till three hours had passed that we succeeded in capturing two of the three. The other one we could not find anywhere. The secret of their elusiveness lay in the fact of their protective coloration and their silence. The two youngsters which were eventually captured, we found crouched down at the water's edge under the overhanging bank. The movements of the parents led to their undoing.

By the time we had accomplished these two captures, it was far too dark for camera work, and we were faced with the necessity of either liberating our spoil or of taking them home with us—a distance of three miles or so. As we did not wish to have a repetition of our troubles, we decided on the latter course. They reposed quietly in a boot box in our bedroom all that night.

Very little after daylight they again found themselves on their native heath, needless to say minus their liberty. The parents made little demonstration at their return, but to our intense relief set about at once filling two aching voids which must surely by that time have been somewhat of a discomfort to their owners. We allowed them some little time to recuperate, and then set about photography. The pictures we eventually obtained cost four or five hours of perspiration and patience.

Our experience pointed out one notable difference between the habits of the Grass Bird and those of most other species. Most birds we have found to prefer using

CREEK LOVERS AND OTHERS

the highest and most prominent points in approaching their nests or young. Not so the Grass Bird. Any object elevated ever so little was consistently and resolutely shunned. This was a serious disability from a photographic point of view, because, as we have explained previously, it is necessary to focus exactly upon some definite point, and to make the exposure when that point is occupied. Eventually we succeeded in inducing our subjects to agree to the degree of elevation afforded by a stick lying on the ground. To achieve even this result, it was necessary to cut off every other avenue of approach by barriers of handkerchiefs and other articles more likely to inspire fear than the chosen perch.

Stubble Quail are fairly plentiful at certain periods in and about the crop-paddocks along the course of the Darebin. Once or twice we have found their nests, and once we captured two young birds. The parents in either case, however, were in no mood for portraiture. Protectively coloured birds we have never found otherwise, and the Quail is essentially a protectively coloured species. The nest is not a nest at all (if such a statement may be allowed). It is simply a depression in the ground, a few grass stems, with a large clutch of spotted or blotched eggs on top.

A nest of the Pectoral Rail, containing seven eggs, was also found during a Saturday afternoon ramble through the wilds of Preston. The opportunity of being disappointed by the owner of this home was denied us by the dangerously close proximity of some small boys, who would have had their curiosity aroused had we attempted photography. Probably we are not much worse off for the loss of this opportunity, as the Rail is another bird protectively coloured.

The suburban birds we have already mentioned, though the list is far from complete, will be sufficient to keep any beginner at bird-photography busy for a considerable period. If they do not keep him employed until his apprenticeship is fully served, he is indeed fortunate.



Young White-backed Magpie.

PART III.

Birds of the Gum-Tree and Plain



Kookaburra.

CHAPTER VII.

POPULAR AUSTRALIANS.

THE birds best known to most Australians are those common species of a size sufficient to command attention. The smaller birds, speaking generally, are much less widely known. Probably first in order of popularity comes the Magpie, whose familiar outline, along with that of the Jackass, has adorned picture postcards and souvenir booklets from the time when such were first known in this country. The ferocity (frequently quite unnecessary) exhibited by these birds during the nesting season is well-known. One of the writers has vivid recollections of unprovoked attacks by pairs which unfortunately evinced a desire to rear broods in the vicinity of his home. Most boys respect the pluck of the Magpie, nevertheless, and we have known very few cases indeed where one of the birds has been harmed as a result of its ferocity, even when other and more innocent birds have become the victims of the boy with the pea-rifle. Once or twice we have seen a Magpie shot by an angry youth, and on each occasion the perpetrator of the deed was talked to severely by the rest of the company. There were four species of birds which, in our day at any rate, ran little risk at the hands of boys. They were the Magpie, the Jackass, the Redbreast, and the Swallow. The last-named was held especially sacred, and it was universally agreed that ill-luck would befall the person who so much as robbed a Swallow of its egg. So strong was this belief that there was only one Swallow's egg in the whole of the collections in the Meredith district, and the owner of that passed it off to his fellows as an egg of the White-fronted Chat.

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However, to return to the Magpie. It is our great regret that such a popular and famous Australian should not be well figured in this book. The best we can do for the reader is a poor picture of a young bird bearing a very woe-begone expression. Certainly there is a fine specimen of the Magpie tribe tame, or supposed to be, in the back yard of one of our homes. We could have pictured him and done full justice to the dignity of the species, were it not that, as explained before, we have a well-defined objection to publishing pictures which are not genuine representations of the wild bird.

There are two species of Magpie in Victoria, and their habits, we believe, are much alike. There is a noticeable difference, however, which the names of the species indicate, in the colour of the back. The White-backed species is widely distributed, but the Black-backed is found only on the Northern side of the Dividing Range and is therefore little known to us. Our remarks, therefore, refer only to the White-backs. Nests may be found early in the season, from August onwards, so early that it comes often as a shock when a sudden swoop and clap of a vicious beak remind one that nesting has commenced. The nest is a large structure of sticks, easily seen, at a fair height, in a gum-tree for preference. It is lined with grasses and horse-or cow-hair. The eggs, usually three in number, vary greatly with the different clutches. So much so that description is practically useless. The most usual colour, however, is a stone ground, with heavy blotches of dark brown or purple.

The Magpie is a useful insect destroyer, whose living comes from the soil—rather unwillingly it may be said. We are unable to say whether wild Magpies show similar tendencies, but the so-called tame bird above referred to has not a great deal of time—or space—for worms, unless they are very small and tender. The larger ones he ignores. Possibly he is too well fed.

The Kookaburra, or Laughing Jackass, is as well known as the Magpie. However, these birds have little in common other than that they derive their livelihood mainly from the ground, and their dispositions are less alike than chalk and cheese. The Magpie is a tireless, energetic bird, while the Jackass is stolid and thoughtful.

With the Kookaburra we have had much more success

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than with the Magpie, and the picture reproduced on page 100 will give a clearer idea of the bird than pages of description. We were exceptionally fortunate to obtain a series of pictures of the Kookaburra. Incidentally, as mentioned elsewhere, it is the nearest approach to picturing a tame bird of which we have been guilty. It was a wild bird, nevertheless, and there need be, we suppose, no real reason for our qualms. We have to thank certain residents of Ferntree Gully for our ability to obtain the pictures. Photography in large trees such as the Jackass occupies usually necessitates the possession of a certain amount of tackle; and we had none. Our anxiety as to whether we would be able to obtain pictures of such a representative bird therefore may be easily understood. We awoke one morning to find the solution within our grasp. Our week-end headquarters at Ferntree Gully possessed no alarm-clock among its limited furnishings, nor was one needed. Three or four Jackasses shared between them the odium usually incurred by that household article. We were soon struck by the degree of trustfulness exhibited by the unconscious humourists, and found that the residents were wont to feed them with scraps from their tables. Our experiments in the same direction were successful to the extent of the major portion of our meat supply, and we found it necessary merely to train the camera on a stump in the yard which was well adorned with steak, fastened by the way, to prevent a too hasty disappearance. The meat disappeared though, as also did the tacks used to secure it, and the series of pictures necessitated the expenditure of quite a large sum on prime gravy beef at fashionably extortionate prices.

There is no need to describe the habits of the Jackass, or his idea of music—both are well known. The nest is simply a hollow, usually in a fairly high tree, and the eggs are laid on the powdered rotting wood. The eggs number two or three, or more, and, as is usually the case with eggs laid in a dark position, are pure white in colour.

When the Kookaburras at the Gully house greeted us on one occasion with an introduction to three lusty and rowdy young ones, we decided that a raw meat diet was out of the question, so we dug in the ground instead. A more arduous process, but cheaper. The three youngsters were left in a row on the fence while the parents explored the

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ground as it was turned. The fat white grubs, so much appreciated in our young days for eel fishing, attracted them mightily, and it was a pretty sight to see the three young enthusiasts sparring for the choice of positions on the rail.

In certain quarters lately, the Jackass has been subjected to a fair amount of adverse criticism. Whether it is merited or not we do not attempt to say, but we will express the opinion that it is a very dangerous practice for a person with a reputation as an expert to indulge in any adverse comments on a bird unless he is perfectly satisfied that the subject of his remarks is of absolutely no value. There are quite a number of ignorant and vicious people who are only too glad to take advantage of any excuse for indulging their lust to kill. At any rate, it appears remarkable that this old bird should have posed as a benefactor for so long if his character is as bad as some now paint it.

Whatever doubt there may be as to the usefulness of the Jackass, there is no room for any with regard to the Magpie Lark, or Mud Lark, as it is more usually called. This is another bird of the open timber which has so far eluded us. Its plumage is a pure white and a glossy black, not unlike that of the Magpie. The Mud Lark, however, is a much smaller bird. It may frequently be seen feeding over swampy ground or in the shallow water around the edge of some waterhole. Its claim to extreme usefulness rests on its partiality for a small water snail which harbours, in one stage of its growth, the destructive liver fluke—the bane of the sheep farmer. The nest of the species is a cleverly constructed bowl of mud, lined with grasses, and placed on a horizontal branch of fair size. There are only four Australian birds within the range of our experience which build homes of mud. The Welcome Swallow, the White-winged Chough, and the species under review build open cup-shaped structures, while another species of Swallow, the Fairy Martin, builds a remarkable bottle-shaped nest having the entrance in the form of a long neck. The appearance of the last-named home will be seen in the illustration appearing on page 87.

The nesting season of the Magpie Lark may be expected to commence about the month of October. The eggs, usually three or four in number, are also subject to



Striated Tit.

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considerable variation. The most usual colour is a faint pink ground, with red or reddish brown spots, especially about the larger end.

The native Miner is a noisy bird of the Honeyeater family, with a bad reputation among sportsmen. The ground for their complaint arises out of the warning alarm notes spread far and wide by the Miner on the approach of an intruder. It is a quietly coloured grey bird, but a patch of bare yellow skin around each eye gives it a rather peculiar appearance. Once, and once only, have we entertained hopes of photographing one of the species, and we were mightily excited about it, too. A pair, rather more trusting than usual, had built their nest in a very small bush on the banks of a creek at Meredith. We watched the nest in the building, and rejoiced when we saw the first egg. The following day a flood removed the nest and the egg, and our hopes also.

The Wattle Bird is another Honeyeater, just as noisy as the Miner and its hoarse barking call is even less musical than that of the latter species. At Cowes, Phillip Island, there are a great number of Wattle Birds, attracted, apparently, by the Banksia trees which grow there in profusion. The usual bullying habits of the Honeyeaters are well maintained by this bird, and we became quite annoyed at the action of a pair which discovered, as we did, the nesting hole of a family of Orange-tipped Pardalotes in one of the Banksias in the front garden. They gave those Pardalotes absolutely no rest from daylight to dark. As soon as the smaller bird arrived in the nesting tree with food for its brood, or left the nesting hole to search for more, the larger one swooped down upon it furiously.

Almost all Honeyeaters show a tendency to bully smaller birds. The Noisy Miner, we think, is the most in-offensive of the family.

In the Greensborough district we have more than once happened across colonies of the White-browed Babbler, a very noisy, sociable, and energetic inhabitant of the medium-sized timber. It is a brown bird, having a long, slim body, a long tail, a white eyebrow, and an everlasting chatter. The nest is a large stick one, untidy, and with the entrance in the side. As a matter of fact, the bird usually builds two or more nests, but uses one only. Just



White-browed Wood Swallow (female) at nest.

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what purpose the remaining nests serve is difficult to determine, though it is suggested that they are used as play nests. Certainly the Babbler is a very playful bird, and this explanation is possibly correct. However, we almost invariably favour explanations based upon the undoubted instinct of all wild things to protect themselves, and in this case incline to the belief that the untenanted nests are intended to deceive some enemy. Perhaps the Cuckoo imposes upon the Babbler just as it does upon some of the smaller birds.

We located one accessible nest, which contained three ugly, naked young ones, and unnumbered small visitors besides. These insects are popular neighbours of the Babbler. A wait of half-an-hour—the camera up the tree and ourselves at the foot—convinced us that our attempt was futile.

The socialistic habits of the Babblers are well known. They are an extremely happy family; in fact, one of their popular names indicates this. It is also said that the members of a colony set about building the whole of the nests required, just in the same way as the Fairy Martin is believed to do.

Round the Fern-tree Gully house many of the larger gum-tree birds frolicked or hunted a while and then departed. The Butcher Bird, or, as we used to know him, the Whistling Jack, was a frequent visitor, and his loud flute-like notes disproved the statement that Australia rears no song birds. The Butcher Bird is a murderous rascal, however, with a cruel beak and wicked eye. He has a reputation for dragging defenceless cage birds through the bars, and for hanging his victims in a fork for the purpose of more effective dismemberment. We remember one occasion, long years before any thought of photography had entered our heads, climbing half way to a nest containing young birds. That was as far as we got. The fury of the irate parents made it a positive danger to the climber's eyes to proceed further. The nest is a stick one, after the fashion of that of the Magpie, but smaller.

Of the Parrots, Rosellas were, of course, common, and Crimson Parrots, or "Red Lories," to a lesser degree. Their nests we have found in plenty, and we have removed the young ones to captivity many a time in our young days. We have not, however, discovered a nest suitably situated for

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an attempt at photography. In any case, these birds would probably be difficult subjects to photograph. One drought year in the Meredith district the pretty little Cockatoo Parrakeet, well known, we believe, in the neighbourhood of the Murray River, appeared in numbers, although not previously known in the locality. They nested in rail fences and small trees—anywhere, in fact. We had one in a cage some years later. After laying eight white rounded eggs, it succeeded in eating its way out of prison and departed.

Far back in our very young days, when we shot with a pea-rifle instead of with a camera, our efforts were often directed towards the little Musk Lorikeet, or Green Keet, which congregated in noisy flocks in the gum trees. As the latter name indicates, they are small green birds, very pretty to see, though anything but musical to hear. We learned nothing of their nesting habits in these shooting days, but proved many a time the extraordinary tenacity to life of this and most other species of Parrots. The Lorikeet does considerable damage at certain seasons amongst the orchards, and this fact accounted for the wholesale slaughter in which we participated.

In the mountain timber round and about the Gully, we frequently saw and heard the large Black Cockatoo which associated in small flocks of eight or ten birds well back from the busy highways. Frequently, also, we saw evidence of its search for food under the bark of large trees, limbs of which were stripped bare. Timber-loving grubs form a stable item in the menu of the species.

Two other species of Cockatoo are distant acquaintances of ours also. The dark grey and red-headed Gang Gang in country similar to that beloved of the Black Cockatoo, and the common Galah, or Rose-breasted Cockatoo, in the open plain timber. The two birds are frequently confused by the casual observer, though little resemblance will be noticed when the species are seen together.

The Black-faced Cuckoo Shrike, frequently, though erroneously, called the Blue Pigeon, is a graceful bird of slaty grey plumage and with a black face. It nests fairly high, and for that reason has escaped our attentions so far. The nest, furthermore, being very shallow, is not easily seen from beneath. Except in size, it much resembles that of the little Brown Flycatcher. The eggs, usually two in number, are dark green, thickly blotched with purple and

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brown markings. The flight of the bird is undulating, and its note a harsh gurgle.

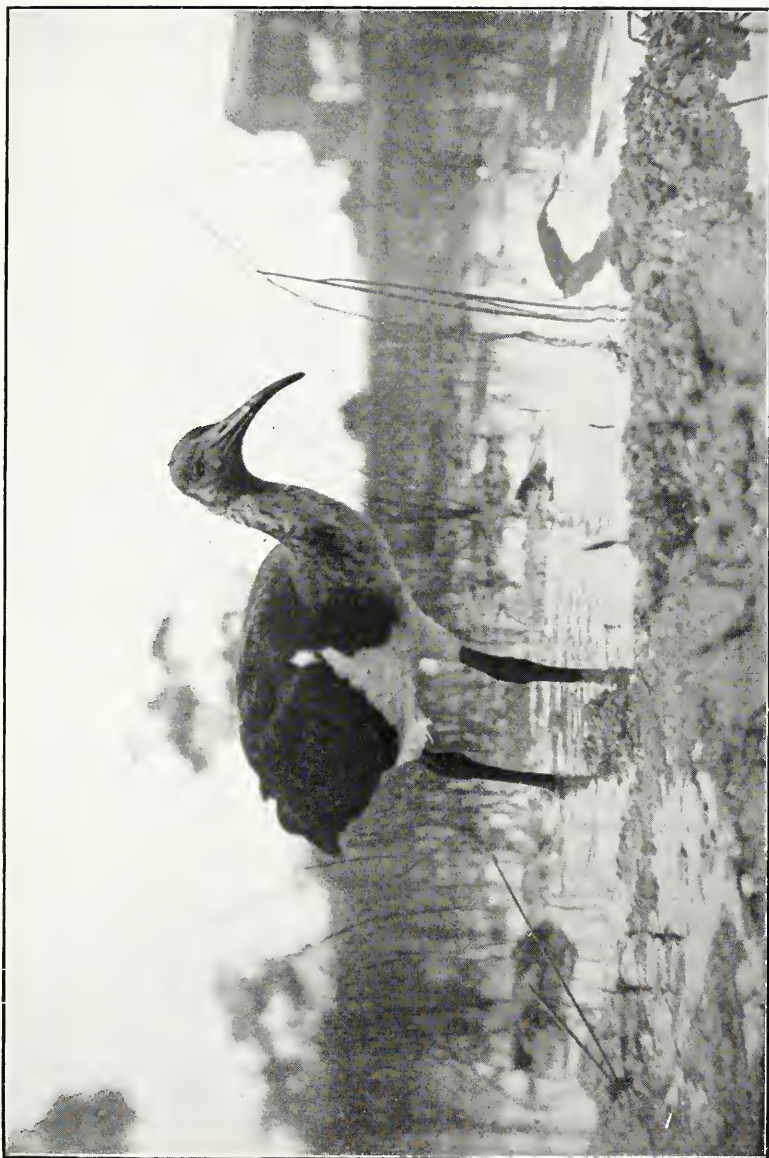
Our experience of the Pigeon family has been limited to a distant acquaintance with two species. The Bronzewing Pigeon is a bird about the size of the common pigeon which inhabits our city buildings,—by no means rare, but of habits which render a close friendship unlikely. Once years ago we discovered a nest, but unfortunately had no means of obtaining the portrait of its owner. It was built on the horizontal branch of a small gum-tree near which we happened to be camped. The female sat on her two white eggs with apparent unconcern at our proximity. In this instance, at any rate, the stick nest was so frail that the eggs could be plainly seen from beneath. The general appearance of the bird is brown, while the legs are red. As the name indicates, the wings have a beautiful bronze sheen, exactly similar to that of the wings of the Bronze Cuckoo.

The Wonga Wonga Pigeon is a much larger bird, and is really rare. We were fortunate enough to obtain a fair view of one of them on a densely timbered hillside at Fern-tree Gully. Its slaty-grey back and white underparts mystified us at first. Both of the species mentioned feed on seeds and fallen fruits.

The Southern Stone Plover, commonly called the “Curlew,” is a large open country bird, unfortunately becoming rare. It stands about twenty inches high, and has a streaked grey plumage which harmonises well with the class of ground which it frequents. The eggs are laid on the bare earth, and are also protectively coloured.

We have seen the species only once in its natural surroundings. The lightly timbered plain country around Meredith suited them admirably until such pests as foxes and firearms in undeserving hands, thinned them out considerably. An extended period of watching, and a very diligent search failed to disclose a nest of the pair of birds mentioned.

One dark night, while feeling our way up the hill to the Gully house with the aid of a wire fence which led in a convenient direction, we came face to face with a young Frogmouth staring wide-eyed at us from one of the posts. His sudden and unexpected appearance gave us a creepy ghost feeling, but we secured him nevertheless. We



Straw-necked Ibis.

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took him to the house and examined him, his parents the while expressing themselves in their own weird booming fashion. Had our cameras been handy, he would have remained with us till the morning. As it was we allowed him to depart.

On the main Sassafras road, near the Station, a pair of pretty little Sacred Kingfishers seemed to have established their home. Their shrill monotonous call could be heard at almost any hour of the day. We have searched long and diligently for a nest which would give promise of photographic results, but so far we have not succeeded, and our only knowledge of the habits of the bird is the memory of a nest found away back in the dim past of childhood's days.

On page 111 is reproduced a photograph for which we would deem it necessary to offer an apology, were it not for the fact that pictures of the bird are not common. The primitive apparatus in use when the snap was taken, moreover, rendered any degree of success at all something to be prized. The Straw-necked Ibis is a fine bird—a noble bird to look at, and a useful one as well. Like the Cockatoo Parrakeet already referred to, it puts in an appearance in the Meredith district or round about Melbourne only when a bad season depletes its food supply further north. A flock of several hundred Ibis, indulging in their slow, uniform flight, is a sight indeed. The picture mentioned was taken in December, 1909, while flocks of this solitary subject's companions were taking toll of the grasshoppers and similar pests in the sheep runs within a few miles of the township. The reason for this bird's hermit disposition we know not. He made a good living, that was evident, from the shallow water round the edges of the water-holes in the vicinity of the Railway Station. The photograph is one of the few we have been able to secure without the accustomed attraction of a nest or young birds. This bird was simply feeding, and was driven into the required position by the brother and sister of one of the writers. The old magazine camera was fastened firmly to the ground with sticks and trained on a small piece of bark at a measured distance in the shallow water. When the operator had retired with a considerable length of thick cord attached to the camera shutter, the other members of the party, by a judicious disposition of their forces, directed the subject's feeding operations in the required direction. Once

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or twice the old fellow appeared "fed up," to use an Australianism, with being shadowed, and appeared disposed to remove himself to one of the other waterholes near by. This disaster was averted, however, and at length the waiting photographer, from his observation post, was satisfied that his subject occupied a position very little removed from that marked by the bark. Then he closed his eyes and pulled with all his might. It required some pressure to release the shutter of this old camera. The result is a faint and very disproportioned idea of the appearance of the bird.

In real life the Ibis does not stand ten feet in his bare feet, as the picture suggests, but about one-fifth of that measurement. The lack of proportion is caused by the undue conflict of the bird with trees, and with the large building in the background. This in turn has been the result of the camera being operated from the ground, an unnatural position. The large building referred to is the Meredith Railway Station. The Straw-necked Ibis feeds upon grasshoppers and other pests, and well deserves the worship which the Egyptians bestowed on their form of the species. The back of the Straw-necked Ibis is a beautiful glossy black, and the underparts snow white. Its name is derived from the straw colour of the neck and upper breast.

On one occasion, several years ago, we came very near to obtaining pictures of a most interesting subject. While spending a short holiday at Warrandyte, we discovered the hanging nest of the Olive-backed Oriole in a gum sapling at a fair height above the ground. We shinned up and disturbed two foolish-looking young birds just about ready to leave home. Whether ready or not, they left, and we captured them on the ground below. They sat for us, with a considerably bored expression, on a stick while we made ready to picture their parents when they should arrive to feed them. In about an hour it became apparent that our first experience of the Oriole was not likely to be successful, but we persevered. Heavy clouds obscured the sun, however, just at a time when our subjects were becoming courageous, and we had to desist. We photographed the young birds as they sat, and the result was the most laughable bird picture we have taken. The expression of utter stupidity which our negative showed, we have found to be

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implanted also upon the faces of young of the species photographed by other observers. Unfortunately, our negative long ago came to grief. The adult Oriole is a fine bird, with a bright green-brown back, and underparts of light grey, streaked with dark markings. The bill is red and the eye a bright scarlet.

CHAPTER VIII.

NUMEROUS SMALL SUBJECTS.

THE class of country beloved of the Magpie, the Miner and other species mentioned in the preceding chapter, has many other and more accessible inhabitants. Those birds which see fit to build their homes upon the ground, or, more correctly, in the ground, best suit the convenience of the Nature photographer. There are not many such species—we wish there were more—but the few there are have had a considerable amount of our unwelcome patronage. Our chief offence in this respect is against the Pardalotes, small, engaging birds which, but for the expense, we could photograph continually without becoming weary. Between us we have about forty pictures of these birds, and have, in addition, consigned dozens of “second rates” to the scrap-heap. Our experience of the Diamond Birds, which is their popular name, is confined to two species, although there are others in Victoria.

The larger species, the Orange-tipped Pardalote, has received most of our attention. The open, and in places, sandy, country in the Greensborough and Eltham districts provides a wealth of nesting sites. The sides of dry water-courses and of unused sand pits are favourite positions, and the same nesting holes are used year after year. The nest is built always in a tunnel, sometimes in a tree, but more often in the ground. In the latter case the tunnel is drilled by the aid of beak and claw, with a slightly upward tendency toward the nesting chamber, presumably to prevent dampness in wet weather. They are energetic



Spotted Pardalote approaching nesting burrow.

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builders, and their nest, a neat structure of stringy bark and grasses, is a marvel of bird architecture, considering the fact that it is built in the darkness of the tunnel. Our partiality, as photographers, to this little bird has two causes. First, the extreme trustfulness of the adults; and, secondly, the ease with which their movements, or those of any other birds building similarly, may be foretold. They can enter the nest by one means only, and the operator disposes his forces accordingly. Such is the reputation with us of this species that it is quite a common practice, if towards the end of the day we have failed to obtain any pictures, to visit one or other of the many spots we know to be beloved of Diamond Birds, and there relieve our disappointment by watching and picturing them to our hearts' content. Anyone who knows how disappointing it is to walk all day without achieving any result, will not accuse us of wastefulness in picturing birds, such as these, of which we already have a fairly complete record.

Our reliance on the trustfulness of the Pardalote has once or twice led us into difficulties. On one occasion, after singing the praises of the species to an observer, who had evidently not found them tractable, we volunteered to give him an opportunity of experiencing their charm. He readily agreed, and endured quite light-heartedly a four-mile walk on a scorching day, to the particular sand-pit selected. Three or four hours of torment by flies and mosquitoes, and of thirst unquenched, was rewarded only by an occasional glimpse of the birds at a distance of several yards. Apparently the nest contained, at the time, neither eggs nor young, otherwise this pair of birds, friends of three seasons, would not have been guilty of such conduct. We three walked home in the cool of the evening feeling very glum, the visitor especially. The pictures we have of this bird are amongst our best, as the reader will be able to verify. This, no doubt, is due partly to their trustfulness and partly to the position of their home. Those two advantages eliminate the greatest of the many difficulties which beset the bird-photographer.

The bird pictured on page 119 had its nest stowed away in a small hollow log lying on the ground. Young birds could be distinctly heard inside, and when the parent arrived with food to satisfy their wants, she found the front door of her home closed with a piece of stick, which,

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by the way, may be seen in the right hand bottom corner of the picture. She also found two intruders and an unnatural looking object with a large bright eye staring downward threateningly. She took very little notice, however, and perched on the point of the nesting log in exactly the position desired by the intruders. She stayed there a long time, and returned repeatedly. Her antics and her plaintive little call when she found all efforts to remove the obstruction unavailing were rather pitiful, and we were constrained to allow her in. Before doing so, however, we obtained a picture while our subject was in the act of emitting the call mentioned. The sound the camera failed to reproduce, but the characteristic stretching of the neck and sideways turn of the head are well depicted.

The Orange-tipped Pardalote is a small grey and brown bird, with a darker head streaked white, and a streak of white and yellow over each eye. There is also a streak of yellow on each flank. In the photograph the yellow markings mentioned appear as a medium brown. The incorrectness of the colour rendering is one of the defects in wild life photography.

The nest has been described. The eggs, being in a dark position, are pearly white, and of a size somewhat larger than one would expect. The usual clutch is three or four.

The Spotted Pardalote differs greatly in appearance from the Orange-tipped, but otherwise possesses much the same characteristics. It always builds in the ground, and is also a tractable subject. It is a beautiful little bird, its dark brown plumage being spangled with small spots of white. Its throat is a bright yellow, and the tail coverts both below and above are brightly coloured with red orange and yellow. The total length of the bird is three and a half inches, somewhat smaller than the other species.

Our experience of this Diamond Bird also is considerable. We first met it, so far as we know, at Warrandyte in 1910, when we spent a short holiday there. In the bank of a little creek near the township we noticed a small bird disappear, and investigated. It came out with a rush almost in our faces, and we set up the camera. In a very little time both birds were in a small bush beside us, and showed very little hesitation about entering their home. We photographed both male and female, and then caught the



Orange-tipped Pardalote.

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birds as they left the nest. Even this unusual treatment had little effect on their trustfulness, and they continued their work as soon as they were liberated.

In the banks of a sand pit between Greensborough and Eltham a pair of "Spotties" nested every season, and were disturbed also every season by our attentions. A photograph of the site of this nest is reproduced on page 128, and will convey some idea of the class of position chosen by both species of Diamond Bird. The entrance to the nesting hole is plainly visible. The picture of a male "Spottie" was obtained near this nest.

The haunts of the Diamond Birds in the Greensborough and Eltham districts are also famous to us for the opportunities of observing the Speckled Warbler, a small bird, not uncommon but far from widely known. The opportunities for its observation in this district are unlimited, as we have stated, but the opportunities for photographing it are rare—here or elsewhere. It is not at all an easy bird to deal with, and, so far as we are aware, we possess the only pictures of it in its natural surroundings. What credit there is due to us for such a result has been hard-earned, as it was after many hours of patient waiting at scores of nests that we happened across a pair of birds more trustful than usual. Not that we can say that even that degree of trustfulness rendered photography an easy matter.

This particular nest was built amongst the very short grass of an open paddock, and without cover of any kind. It was not easy to locate, nevertheless, as it is a confirmed habit of the species to spare no pains to disguise its home. This is done very successfully, too, a fact which is proved by the conspicuous absence of the egg from the collections of most of the egg-collecting boys of our day. The material of which the nest was composed harmonised so well with the surroundings that we had considerable difficulty in finding it even when we flushed the bird at close quarters. The parents were busy with a brood of young ones recently hatched, and this fact probably accounted for our success eventually. When the camera had been placed in position and trained on the entrance of the nest—the doorstep as it were—we found it necessary to retire to such a distance that it was impossible to see clearly. Within half-an-hour the birds had visited the nest once or



Spinebill Honeyeater at nest.

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twice, but had kept a very sharp eye on the camera. Head and shoulders were thrust into the doorway before we had any opportunity of making an exposure, and we found it necessary to change our tactics. A piece of white quartz was placed level with the ground for the purpose of assisting us to determine when the subject occupied the correct position. The entrance to the nest was also closed to allow us breathing space during the temporary consternation of the parents. Even then the chances of any great success were small, and the negatives, when developed, were a very pleasant surprise. Portion of the nest may be seen in front of the bird.

The Speckled Warbler is a quiet, unobtrusive bird. It searches for insects amongst the grass, and proceeds over the ground by a series of hops. It is only during the nesting season that any but the keen observer is likely to be aware of its presence, but at that time it scolds at the intruder in an unmistakably aggrieved fashion. The nest, as we have already indicated, is built with a deep regard to the protection of its contents. Usually it is built under the cover of some plant or tuft of grass, and is then doubly protected. It is built of grasses and the like, and is warmly and thickly lined, often with rabbit fur.

The plumage of the Speckled Warbler is brown and heavily streaked, as the picture will show. These markings harmonise well with the dry brown grass amongst which the bird finds its living. The degree of protection afforded in this way will be quickly gathered by the observer, who, without the aid of field glasses, attempts from a distance of fifty feet or so to keep the quiet little subjects under observation.

The eggs are extraordinary. No wonder they were prized in our young days. Not only are they hard to procure, but their deep chocolate red colour make them indeed things of beauty. This colour is quite uniform, no spots of any kind appearing on the glossy surface.

In the course of an eight-mile walk to Greensborough, on many occasions, we have come across isolated pairs of the Yellow-breasted Shrike Tit, a fine-looking bird, not unlike the male Golden-breasted Whistler, though much more energetic. Both male and female, moreover, are brightly coloured, and not the male only, as in the case of

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the Whistlers. The main feature of the appearance of the bird is a prominent and immovable black crest.

Its food comes from beneath the bark of trees, and the short stout bill is used to good effect in the search for the insects and grubs to which it is partial. If the bird were common about suburban gardens, it is quite possible that many of our ornamental Acacias would thrive there instead of falling victims to the inevitable borer.

The nest is as a rule built fairly high, and in a gum sapling for preference. It is made of grasses and bark, and is neatly and evenly covered with cobweb. Mr. A. H. Chisholm, who is the moving spirit in Queensland bird study, and an ardent bird protectionist, devoted a considerable amount of time to observing and photographing these birds when he resided at Maryborough, Victoria. His notes and his pictures are most interesting, as, in fact, are all works from the same source.

The Swallow—Welcome or House Swallow—is a common bird known to everyone. Almost everyone also knows that it follows the summer from one portion of Australia to another, sometimes even its migration is much more extensive and other countries are reached. It is a wonderful journey for a small bird, and a glance at the picture on page 32 will show how Nature has provided it for undertaking such extensive migration. Its body is long and slender, as if built for speed, and its wings are both large and powerful. The great speed which the Swallow is able to attain is well known.

It is a homely bird, never more satisfied than when relying for shelter for its mud nest on house or shop verandahs, or other works of man. One evening, while walking along Chapel Street, Prahran, a very busy street, we counted no less than nine nests built under the shop verandahs.

We are extremely fortunate to have been able to photograph the Swallow. The position of its nest usually does not lend itself readily to photography, on account of the absence of strong light. After a long search, however, we found a nest in an unusual position, which gave just the opportunity we sought. It was built upon a post in the trench which holds the disappearing targets at the rifle range at Meredith. This trench is fitted with a lid which is removable, and an abundance of bright, unaccustomed

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light was easily admitted to the nest. We found, however, that the Swallow, although fond of human society, is rather differently inclined when faced with a camera. Most of the birds which build around the home of man show similar tendencies. Thus it was after a day and a half of patient planning and working that a couple of exposures were made. The photograph reproduced is the result of one of them.

The Swallow is a useful insect destroyer. Here again Nature has fitted it admirably for its work. The picture will show that the beak of the bird is short and wide. This form is particularly suited to the unusual manner in which the insects are captured. The wide bill is opened, and, during the bird's rapid flight, collects the small insects from the air. Most persons will have noticed how the Swallow skims backward and forward close to the ground, or close to the water. It may often be seen performing similar manœuvres close to the feet of a pedestrian as he rouses myriads of small insects from their hiding places amongst the grass.

The Swallow's nest is as wonderful as the bird, which is an architect of no mean order. The picture will illustrate this point. The nest is made entirely of small globules of mud collected and placed in position with the wide beak. Grass stems are used to bind the mud and prevent it from crumbling, just in the same way as the plasterer mixes cowhair or other material with his plaster. How many of the clever inventions of man there are which could have been learned from these lesser examples of Nature's handiwork. More remarkable still is the manner in which these nests, built against an upright post or wall, without even the support afforded to the one pictured, still retain their position, and carry the weight of parents and young ones. Feathers form the lining of the nest, and a soft bed for the young ones.

The eggs, usually four or five in number, are small and white, marked with small spots, often nearly black. The nesting season commences early, eggs being often laid before the end of September.

Even more remarkable skill in nest building is exhibited by another species, very similar to the Welcome Swallow. This is the Fairy Martin, or Bottle Swallow. The latter name is derived from the shape of the home upon which



Speckled Warbler at nest.

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the bird's skill is employed. The picture appearing on page 87 shows clearly the character of this wonderful structure. It is built, like the home of the Welcome Swallow, of mud collected and placed in position by the bill. One marvels at the manner in which the nest of the Welcome Swallow retains its position against a perpendicular wall, but that phenomenon is commonplace as compared with the manner in which the mud home of the Bottle Swallow remains secure through wind and weather and carries the strain placed upon it when four fully grown young birds occupy its cosy interior. The Fairy Martin also uses grass stems and the like to bind the mud, but appears to be too tidy and thorough to allow any ends to show when the nest is complete. Both the Welcome Swallow and this species commence their nest with a crescent of mud foundation, upon which the rest is gradually built up. In the picture of Fairy Martins' nests one of these crescents, abandoned evidently, may be seen.

The Fairy Martins are remarkable in still another way. Their nests are built close together in groups often much larger than that photographed. Sometimes there are hundreds of these homes together in some little cave or niche in a wall of rock. It is also said that a company of these birds club together when nest-building begins, and construct, by common effort, enough nests for the whole flock. Perhaps the presence of unfinished nests, such as the one already referred to, can be accounted for by the too hasty action of the flock of birds and a subsequent discovery that there is one foundation too many. Our actual experience of the bird is small, thanks to the action of boys, who, in the Greensborough district, at any rate, never allow young birds to appear in the nests. It is quite evident that the Fairy Martin does not enjoy the immunity from interference that the Welcome Swallow did in our day. We have, moreover, had no opportunity of investigating the correctness or otherwise, of the general belief as to their method of home building.

Nests of the species we have found in October and later. The usual clutch of eggs is three or four, and in appearance they resemble those of the Welcome Swallow.

Our experience of the Finches, or, more correctly, Grass Finches, in the wild state has been limited, partly because there are really only two species found within the range of

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our observations, and they are not at all easy to photograph. The Spotted-sided Finch, more commonly known as the Diamond Sparrow, is a popular aviary bird, with a certain claim to beauty. Unfortunately, it is not at all common around Greensborough and Eltham, and our experience is limited to three or four passing glimpses. It feeds on the ground, and, when thus employed, somewhat resembles the well-known White-fronted Chat. When on the wing, however, prominent white spangles on its sides, and bright red at the base of the tail, quickly distinguish it from the other species.

The little Red-browed Finch we know more about. It also is a well-known aviary bird, but there is little need to confine it in an aviary when it may be seen in great numbers not more than six or seven miles from the city. In the Greensborough district its large untidy nests occupy many of the creekside bushes and shrubs. The general appearance of the Wax-bill, as it is more generally called, is a warm brown, while a bright red mark appears above each eye. The base of the tail is similarly coloured.

More than once we have attempted to photograph the Wax-bill, but up to the present without success. We have found it to be not at all confiding in its ways. The outside of the nest is untidy, as has been indicated, but it is clean, which is a great deal more than can be said of the inside. This is one of the few birds known to us which makes no attempt to clean its nest, and the result is not inviting. Quite often as many as seven small white eggs are laid. In fact, we have more than once been led to believe that two birds had laid, and were incubating in the same nest.

The Chestnut-eared Finch is another hardy and energetic Grass Finch. It, however, is not known so far south as Melbourne. Around Bendigo, we believe, the bird is often seen in large numbers.

Much of our effort and energy has been wasted upon a little bird whose picture we have always been eager to obtain. The Grass Warbler, or Corn Bird, is one of the most remarkable inhabitants of crop and grass lands, where its weird note may often be heard, but the owner is seldom seen. Its flight is weak, and when it essays to travel by air it may easily be mistaken for a large butterfly. Almost as soon as the crops are sufficiently grown to provide cover



Nesting site of Spotted Pardalote.
(The entrance to the burrow may be seen about the centre of
the picture.)

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for the Grass Warbler, two whistling notes, followed by a rasping sound, greets the ear of the Nature student, but fail to attract the attention of others. It is extremely difficult to trace this call, moreover, as the owner thereof is an efficient ventriloquist.

Possibly we would have succeeded before now in locating a nest of the species were it not for the fact that any kind of crop in these days is far too valuable to be trodden down by roaming bird observers. Only once have we been able to make a serious attempt to trace the bird to its home, which in this case we judged to be hidden in a self-sown and not very valuable crop. We were unsuccessful, but the insight which we there obtained into its ways may be useful to us later on.

Many people are unaware that we have a native Song Lark which soars as it sings, just as the English Skylark does. Our Lark has not a song comparable with that of the introduced bird, but the credit nevertheless that is due to it in this respect is usually assigned to the English Lark. When seen, moreover, the Song Lark is frequently confused with our own Pipit, so that in all respects its light is hidden beneath a bushel. The nest and eggs resemble greatly those of the Pipit.

That wonderful bird, the Bee-eater, is not a South Victorian native; we only wish that it were. We have a great and strong desire to picture a species of such remarkable beauty, and have also one eye on the fact that it is one of those satisfactory nest builders which choose a burrow in the ground. As the name of the bird indicates, it is not averse to putting a bee in its place now and again, thereby incurring displeasure in certain circles. However, it would have been just as correct to call the bird the Insect-eater, as it disposes of many more of other insects than it does of bees. Probably, also, its reputation would have been much better as a result of such a course. As matters stand, its name has probably a great deal more to do with its unpopularity than has the number of bees it destroys.

We saw the Bee-eater once, once only, and for a fraction of a second. We believe that a record of the bird so far south is very unusual, but we are positive that our observation was correct. The bird we saw was disporting itself in the tea-tree scrub along the course of the Plenty River, Greensborough. We both saw it just for an instant, and



Flame-breasted Robin (male).

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then it disappeared forever. The general appearance of the upper surface of the bird is a brownish green, while the tail is black and the throat is a beautiful orange. To complete its remarkable appearance, two long feathers project far beyond the rest of the tail in a manner quite uncommon amongst birds which inhabit districts so far south as does the Bee-eater.

In the restricted area of timbered country covered by our observations three species of Robins make their homes. Two of them are what are popularly termed Redbreasts. The most common of these is the Scarlet-breasted Robin, a bird which, so far as colour is concerned, leaves the English Robin, of which we have all read, very far behind. As a matter of fact, when compared with our own Redbreasts, the English bird does not merit the name. Its breast is of a rusty colour, and not at all red, as we understand the term.

The male Scarlet-breast is a beautiful bird. Its back is a good glossy black, while a prominent white mark appears on each wing. The breast is bright scarlet, and the remainder of the underparts greyish white. It builds freely in the timbered lands around Ferntree Gully, and we discovered many nests during our week-end rambles. At several of these we made attempts to photograph the adult birds, but were never successful. At Evelyn, however, we discovered a nest building in a pile of firewood stacked ready for carting. On a very wet week-end a few weeks later we paid a visit to the spot, and crawled up a hollow log near by to wait for the weather to break. The weather, however, was more inclined to break records than otherwise, and we sat in misery. Furthermore, we were not used to sitting still, and found it hard to endure. After a couple of hours of that patent unbreakable weather, peculiar to the hill country, we decided to leave our shelter. We set up the camera before the nest, and soon found that, if we did not appreciate shelter, the female Scarlet-breast did. She sat very closely. Our only difficulty was the absence of light and the presence of rain drops which persisted in adorning the lens. The photograph we obtained was taken under great difficulties, and we are rather proud of it.

The usual daintiness of this bird's nest is not apparent in the one pictured. It was unusually untidy and built in an unusual position. The site generally chosen is the fork of a medium-sized tree, and ten feet or so above the ground.

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The height of the breeding season is towards the end of November. The eggs are usually two or three in number, and are of a ground colour between a slaty stone and green, with blotches and markings of brown and dark stone. The young birds, when fledged, little resemble the parents. They are of a mottled brown colour, and difficult to distinguish from the surroundings.

The female of this species, and that of the Flame-breasted Robin, the other Red-breast known to us, resemble each other greatly. The female Scarlet-breast, however, very often has a very faint wash of red on the breast, which the female Flame-breast never has. Otherwise they are plain grey birds, with a marking of lighter colour on the wings.

The males of the species are easily distinguished. The back of the male Flame-breast is of a dark grey colour, instead of a glossy black and the red of its breast is less vivid, but continues the whole length of the underparts of the body, instead of covering the breast only, as in the case of the Scarlet. The most easily remembered difference is in the patches of white, which appear on the forehead of each species. In the Scarlet-breast this mark is large and prominent. In the Flame-breast it is smaller, and much less noticeable.

The appearance of the Flame-breasted male may be gathered, minus the colouring, from the picture reproduced on page 130. This picture was taken some years ago at Olinda, a small township about seven miles from Ferntree Gully. The photograph has a history. We were spending the Christmas holidays at Olinda, and sallied out on Christmas Day in the quiet aftermath of a severe thunderstorm. In a cleft in a large stump, right in the township, we noticed a nest, and, with the best of intentions, threw a small stone safely wide of the mark for the purpose of proving whether or not the dilapidated-looking home was occupied. We were surprised beyond measure by the angry tones of a resident opposite, who enquired whether we had any sense or not, trying to destroy a bird's nest. We assured him of several things in retaliation, and went on. The resident had proved for us, however, that the nest was a good one, and we watched it surreptitiously. When the young birds, which we soon discovered resided within, left the nest we captured them and conveyed them beyond the



Brown Flycatcher settling on eggs.

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reach of prying eyes. The picture mentioned is one of the results of this exploit. It is not the only one, either, as first of all a clumsy cow, and, later, a dog, became entangled in our cotton, and made pictures of a bare stone. With the male bird we were able to take any number of liberties: we could have photographed it feeding the young birds on our hands. The female, however, quite unlike most of her sex, thought more of her own safety than that of the young ones, and kept in the background. The photograph again illustrates the defectiveness of photography where colours are concerned. The photographic plate has failed to convey any idea that the breast of the bird is a beautiful flame red.

By the time we had satisfied our desire for pictures we had succeeded in forgiving our persecutor of a few days before, and had decided, as he was apparently a kindred spirit so far as bird protection was concerned, to beard him in his den. We found him friendly—much more so than our first experience indicated. Our visit resulted in an hour's yarn with a fine Nature-lover. Of the other species of Robin, the Black and White, we have had little experience.

The females of the species of Robins described bear considerable resemblance to both male and female Brown Flycatcher, a small grey bird variously known as Stump Bird, Jacky Winter, and Peter Peter. The first of these popular names has its origin in a habit the species has of using a stump or a fence post as a look-out for unfortunate passing insects. When one of these of tempting proportions enters into the field of vision of the Flycatcher, he leaves his post, never fails to capture the wanderer, and then either returns to the post from whence he came or chooses another near by. When he is at rest on a stump or post the tail swings from side to side almost continuously—much as the tail of a domestic cat swings with annoyance.

The Brown Flycatcher is a quiet bird, capable nevertheless of a rather pleasant little song. Its nest is a very dainty structure, built of bark, and covered with cobwebs. Its sides are raised only sufficiently to prevent the eggs from rolling out. The shallow nature of the nest probably accounts for the fact that the bird invariably chooses a fairly large and stable branch as the foundation for its home. The picture appearing on page 133 will give a fair

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idea of the appearance of the nest and of the manner in which it is frequently fitted into a horizontal fork.

Quite usually the nest of the species is placed at a considerable height, rather inconveniently for the photographer. A couple of years ago we were fortunate, however, in locating a nest, close to the house at Ferntree Gully, in which this rule was not observed. Both the pictures reproduced were obtained at this home, which was built on a dead branch about ten feet from the ground. The birds, after a little indecision, became fairly trustful, and our only difficulty was the result of a stubborn desire they showed to face the camera directly. The photographs we obtained on this occasion are, we think, amongst the best in our collections. The correctness of the focus enables one to pick out the details of plumage in a way usually impossible when observing the bird in real life. It may be easily understood, on examining the pictures reproduced, that the Brown Flycatcher's nest is not easy to locate without the help of the birds' convicting movements. Even when a bird is sitting on the nest, its grey plumage harmonises well with the colour of the branch on which the nest rests.

The little Warbling Grass Parrot is well known, though by a much shorter and more romantic name. Many cage bird enthusiasts have kept the Love Bird in cages, or, we trust, in aviaries. As a rule, the Love Bird does not usually penetrate so far south as the area over which we have wandered. But when a dry season depletes the food supply further north, large flocks have been seen in the open timber around Greensborough. Their diminutive size, dainty green plumage, and affectionate habits one to the other, make them great favourites, whether in the field or in a cage.

There are a few birds within easy reach of Melbourne which have eluded us so far, but which are down on our list for conquest sooner or later. One of the first is the Emu Wren (a very small species indeed, which lives in the swampy grass country such as that about Koo-wee-rup.) It is a remarkable bird, notable because of its small size and for the beauty of its filmy, upright tail feathers. About its habits we know nothing, as we have never yet seen the bird.

The Tit tribe is a widely distributed one, and two species

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have already been mentioned in the chapter dealing with suburban birds. These two species, and two additional ones, are well-known to us, but there are others about which we have had no experience. The Buff-tailed Tit is a near relative of, and much resembles, the Tom-tit previously described. Some points of difference have already been mentioned, and a few additional ones will become apparent when the nests of the two species are compared. The nest of the Buff-tailed Tit may be found in a variety of positions, but is not as a rule suspended as is that of the Tom-tit. The space between the loose bark and a tree trunk is quite a favourite position, as is also some tangle of undergrowth near the ground. This nest, moreover, is without the upper shelter which is invariably associated with the nesting chamber of the Tom-tit.

It was when we discovered the nest of one of these birds in the side of an old stump on our favourite hillside at Ferntree Gully and essayed to picture its owners, that we first discovered it was a separate species. The bird in question was a particularly trustful one, and we were able to approach the stump quite closely before it would leave. We then noticed something unusual in the marking of the forehead and throat. Dr. Leach's book was consulted, with the result that we at once became anxious to procure photographs. This we did a fortnight later, notwithstanding the fact that the trustfulness shown on the previous occasion was very far from maintained when the camera appeared. After a whole day's work we had our subjects quite accustomed to our presence, and to that of our camera and tripod. Eventually, by holding one of the young birds in our hands, we were able to coax the parents into positions which, to the uninitiated, suggest something in the nature of witchcraft. Many people have doubted our word, we know, when we have mentioned cases in which an adult bird hopped on to our ears, or fed their young in our hands. In a couple of cases we are in a position to prove the fact to the reader, and this is one of such cases. Of course the reader has to accept our assurance that such photographs are genuine ones. In any case, we doubt whether such a degree of deception would be possible did we have any inclination to attempt it.

The following year we discovered a nest not far from the same spot, and probably the property of the same pair



Buff-tailed Tit.

BIRDS OF OUR BUSH

of birds. This nest was built at the base of a briar bush in a dry water-course. We obtained a few pictures here also, rather better ones, perhaps, than those of the previous year.

Curiously enough, while the Buff-tailed Tit somewhat resembles the Tom-tit, so does the other species of which we have had experience, resemble in some respects the Brown Tit already described. The Striated Tit, however, is a much smaller bird than the Tom-tit and the Buff-tailed species, smaller in fact than the Brown Tit. There are at least two other ways in which the Striated Tit may be distinguished from the Brown. Both have the breast streaked, but the Striated species has the crown of the head streaked also. The tail coverts of the Striated species, moreover, are of an olive brown colour, while those of the Brown Tit are a rufous brown. The Striated is partial to the higher branches of the saplings and gum trees, while the Brown prefers the lower growths.

The nest of the Striated Tit is a beautiful thing, being closely built of stringy bark, and lined with feathers or other soft material. The illustration on page 49 pictures it accurately. It is built in the swaying branches of a sapling, usually at a considerable height.

The photographs of this species were taken within a few feet of the nest of the Buff-tailed just mentioned, and a few weeks later than the other set. We were unable to do any photography until the young had left the nest, when we promptly captured them and placed them for safe-keeping in one of the camera bags. The parents were ideal subjects from the beginning, and we were soon able to expose several plates. Our only trouble was caused by an exceedingly high wind, not at all a novelty amongst the woes of the photographer. The following year we obtained a few more pictures at a nest conveniently placed in a position lower than usual.

We are rather proud of a representative collection of photographs of the Tit family and their homes.

CHAPTER IX.

MISTLETOE BIRD, WOOD SWALLOW.

THE species which are recorded in this chapter bear no relation one to the other, except the affinity which arises from the fact that they share the honour of being our most thoroughly observed subjects. Any observation which is calculated to be in any way novel or scientific is more likely to be found in this portion of the book than elsewhere. Our pictorial records of these species, too, are regarded as exceptional, although, of necessity, but a few of the photographs can be placed before the reader in a volume such as this.

In October, 1914, we had our first opportunity of observing the habits of the beautiful Mistletoe Bird, a species not uncommon, but to the casual observer almost unknown. The extreme smallness of the bird and the height and speed of its flight is one of the reasons that it is so little known. The slenderness of our knowledge regarding it left us at a disadvantage in our search for a nest.

The appearance of the bird we knew by study of illustrations, and by fleeting distant glimpses of the subject itself. We knew just sufficiently of the height and the speed of its flight to realise that the task of tracing a nest by the movements of its owners was well-nigh hopeless.

One day, while photographing on our favourite hill at the Gully, we noticed a male of the species attacking a Silver-eye with such persistence as to indicate that the former had a nest somewhere in the vicinity. Such signs to the observer are unmistakable. Several times the Silver-eye returned to a native cherry tree, which was well



Nesting site of Orange-tipped Pardalote.

MISTLETOE BIRD, WOOD SWALLOW

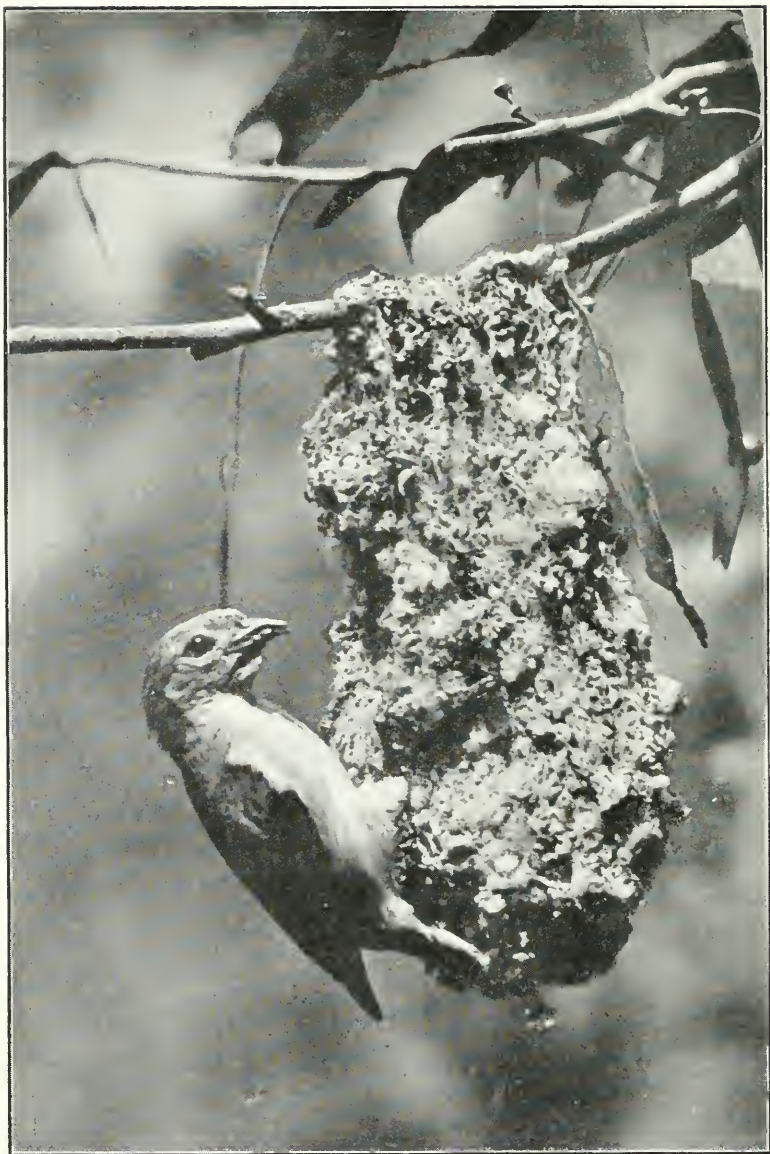
laden with ripe berries, and each time was driven away by an angry flash of red and dark blue. We kept a sharp lookout from where we stood, and presently saw the female Mistletoe Bird arrive with nesting material. Our excitement may be imagined. Her movements led to a small sapling but a few yards from the disputed cherry tree. Here we found the purse-like nest suspended from a horizontal branch about ten feet from the ground. It faced the north, and was built of sheep's wool and the woolly substance collected from dead leaves of the blanket-wood tree. This latter substance grows on the underside of the leaves of the shrub, but, in our opinion, is not removed while the leaves are still green. When a leaf dies, however, the fleshy part withers and curls up, leaving the woolly substance dry and easily removed. We have seen the bird removing the material in this state.

Although we remained near the nest a considerable time, the female did not again appear, and we began to fear that our presence had caused her to desert. The male bird appeared to take no part in the nest building, but confined his attention to clearing his domain of feathered intruders.

It was not until nearly three weeks later that we were again able to visit the hill. We were relieved to find that the nest had survived the severe gales that had been blowing, and that three young birds had been hatched some few days before. The female made several visits with food, and invariably flew to a branch a foot or two above the nest before clinging to the front of it to feed the young. The food at this time consisted of insects only.

The male was not seen at all on this occasion, and the wariness of the female made us doubtful of success. A few days later, nevertheless, we put in an early appearance, provided with fencing rails (borrowed, of course), and string with which to form a staging before the nest. This foundation for the camera was rather on the wobbly side, but served its purpose fairly well. It was only after three days that our subject summoned sufficient courage to cling to the nest while the camera was in position.

On one or two occasions that day the male bird approached to within a few feet of the nest, but brought no food. We were satisfied that he took no part in the feeding duties, and despaired of obtaining his portrait. We did



Mistletoe Bird (female) at nest.

MISTLETOE BIRD, WOOD SWALLOW

so want a picture of him, too. Not to be easily beaten, we visited the spot again the following week-end. We found the young birds well grown, able to call lustily, and to cause bulging of the soft walls of their home in their anxiety to be fed. The male bird now exceeded all our wildest hopes by taking quite an active part in the nourishment of the impatient young ones, and we were soon exposing plates in sweet contentment. On this occasion also the brood was fed exclusively on insects.

Two days later we were again making nuisances of ourselves before the sun was well over the ridge. We exposed many plates this morning also, and were surprised to find that the diet of the young ones had taken a change. Almost the whole of the food now brought to the nest consisted of the sticky *Loranthus* (or Mistletoe) berries devoid of the outer case. Many of the trees in the neighbourhood were badly affected with this parasite. Later on we removed the young ones from their comfortable quarters and experimented. It was not long before we were able to photograph the female bird feeding her young quite unconcernedly on our hands. Similar photographs of the male bird could later have been obtained had it not been that the advent of some dark clouds made camera work no longer practicable.

The photographs of the male and the female Mistletoe Bird at the nest will disclose the curious fact that while the female invariably clung to the front of the nest when feeding the young, the male always performed the same duty by hanging head down from the branch above. We attempted by all the ruses possible to alter this habit of the male, but he remained adamant.

Our observations of the bird on this and some few subsequent occasions, have led us to believe that it is responsible in no slight degree for the spread of the parasitic mistletoe.

Another interesting question we were able to settle was the manner in which the sticky berry was extracted from the casing. This casing was never carried by the bird, and we wished to know how it was got rid of. The trustfulness of our subjects during the later stages of our observations enabled us to see this clearly. When the young ones had been removed from the nest and were being fed by the parents quite close to us, we procured a branch of

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mistletoe well covered with ripe berries, and held it towards them. The birds soon accepted the invitation, and without any hesitation, made use of this convenience instead of bringing berries from a little distance. We already were aware, by the presence of the empty cup-shaped portions of the seed cases under the mistletoe boughs, that the seed was extracted without the cases first being removed from the branch. We now found that the soft case was taken cross-wise in the bird's bill and split by pressure. The free portion of the case was then dropped, leaving the white berry protruding from the cup-shaped half still attached to the branch. By pressure of the remaining piece of the case, the berry was forced out sufficiently to be easily taken in the beak. We could not persuade the birds to take any berries that were not properly ripened. If the branch in our hand held no berries to suit, the food was brought from a tree in the ordinary way.

One of the young birds was a weakling, not nearly so robust as the other two. During the time that berries were to be obtained so near at hand, we were surprised to find that this unfortunate youngster was overlooked time after time, and his share of the spoils divided amongst the other two. We changed his position several times, in the hope that he would thereby come into his own. But he did not. When the female parent, however, returned from one foraging trip, she brought insects in her bill instead of berries. With these she fed the weakling, and we at once saw the reason for the apparent favouritism previously. These parents understood their work well, notwithstanding our foolish idea to the contrary. In their younger and weaker days all three young birds had been fed on insects, and only received a change of diet to mistletoe berries when they became larger and stronger. The weakling had not yet been promoted to the more advanced diet.

Some two months later we again visited the spot and took the remains of the nest for closer examination. We also examined some of the *Loranthus* seeds which had passed through the young birds and had lodged on the branch of a sapling. All had firmly adhered to the branch, and had sent out small shoots. Our observations, as we have said, lead us to believe that the Mistletoe Bird is a very important factor in the spread of the mistletoe parasite. We have watched many other birds from time to



Mistletoe Bird (male) about to feed young.

BIRDS OF OUR BUSH

time amongst the mistletoe, but have not seen any of them eat the berries.

On this hillside at Ferntree Gully and elsewhere, we have since discovered many nests of the Mistletoe Bird, but, with one exception, they have been out of reach of the photographer. We have quite often, also, seen the bird feeding on the berries of the native cherry tree, but we are convinced that this is done only when mistletoe berries are not available.

The picture of the male bird produced on page 145, shows the peculiar attitude assumed when he undertook his duties as a parent. The female, on the other hand, adopted a different position, as shown in the picture on page 142. A picture is also included which shows the female bird in the act of cleaning the nest. Such photographs are rare. The remaining picture we are rather proud of, as it proves the state of trustfulness which may be encouraged, even in a wary subject, by the exercise of care and patience.

The Mistletoe Bird is hardly more than three and a half inches in length, but for distinctiveness and beauty of colouring is unsurpassed by any bird known to us. The male bird is a picture indeed. Its back, head and wings are a most beautiful glossy blue-black, with the appearance of velvet. The throat is a vivid scarlet, and the under tail coverts are faintly tinged with the same colour. The remainder of the underparts are greyish with a bar of dull blue-black down the centre from the breast to the tail. The female is a sober-coloured bird, with a dark grey back and underparts of greyish white. Their appearance may be correctly judged from the photographs, but allowance must be made in viewing that of the male for the fact that, with an uncorrected photographic plate, the bright scarlet of the throat is reproduced as black.

The other subject of this chapter is a much more familiar and noticeable species, and there are few persons who have not seen, even if they have not particularly noticed, the Summer Bird with its dark slaty grey plumage and its skimming flight. Its official name is the White-browed Wood Swallow, and it is one of three allied species which nest annually in the portion of the Continent over which our observations extend. One of the three species remains in the locality all the year round, but the White-browed and the third species are summer visitors only. Some years



Nest and eggs of White-browed Wood Swallow.

BIRDS OF OUR BUSH

they appear in greater numbers than in others, probably owing to a shortage of the food supply further north. The White-browed species is gregarious, that is, its members always travel and hunt in flocks. At nesting time, even, the flock does not break up entirely, although the nests are built far enough apart to ensure each nesting pair a distinct territory of its own.

It is quite evident that a colony of Summer Birds will return to the same locality year after year. On this account we make it an annual practice, no matter what other urgent business is afoot, to pay at least one visit to a picturesque little spot known to us as the "Wood Swallow Paddock." It is situated in the Greensborough district, and not more than twelve miles away from the heart of the city. Its grassy area is intersected by two small gullies forming a V, and it is covered with a six-foot growth of native and introduced bushes—a very quiet and undisturbed spot. The white skeletons of ring-barked gum-trees of other days, dotted at intervals, complete that sense of solitude which the naturalist holds so dear.

Here, within an area of five or six acres, one is sure to find, a few weeks before Christmas, upwards of a dozen families busy with their nestlings. The anxiety we feel each year as to whether the birds have chosen other pastures is dispelled by the notes of alarm as the paddock is reached. As previously mentioned, each pair of birds jealously guards a fixed area surrounding its own nest. In every case this area contains a dead tree, and from the bare limbs of this point of vantage attacks are made on the intruder the moment he crosses the invisible frontier. The nearer to the nest the greater becomes the fury of the attack—an unfailing "hot or cold" tell-tale which soon points out the conspicuous nest. So consistently do the birds hold to their theory of a look-out and a surrounding allotment that not one case has been noticed in this particular colony where a nest is not associated with a dead tree. Further, each pair of birds minds its own business, and leaves the intruder wholly to the fury of the next family as soon as he passes out of their own domain. Should a Wood Swallow trespass on his neighbour's estate he is very suddenly and surely reminded that his own part of the world is safer.

A comparison of the contents of the nests almost in-

MISTLETOE BIRD, WOOD SWALLOW

variably shows that the whole flock commences nesting at the same time. If half-fledged young are found in the first nest it is quite safe to expect the same all round. On one or two occasions, one pair, apparently overtaken by misfortune on the first attempt, has been found a week or more behind the others.

The nest is a shallow structure, usually composed of twigs, grasses and fine roots or horsehair, and bears unmistakable signs of hasty construction. Building operations take, on an average, three days. The position chosen also indicates a certain amount of carelessness. Any small bush, straggling or otherwise, is availed of, and the nest dumped in an upright fork or on a horizontal branch. Very often it is easily discernible from a hundred yards off. The eggs, most often two or three in number, are of a slaty stone colour, heavily blotched with darker markings. The photograph reproduced on page 147 gives a fair impression of the class of shrub selected, the general build of the nest, and the appearance of the eggs. It will be noticed that one of the eggs shown is of unusual shape, being much longer than the other, which was a normal one. This was very noticeable in the eggs themselves. It was quite a disappointment, on a subsequent visit, to find that apparently the business part of the egg was normal, as the chicks were quite alike. Both parents take part in the work of incubation, and in feeding the young. The eggs hatch in about twelve days, and at the end of another twelve the nestlings are well covered with streaked light brown feathers, and are showing a strong inclination to be moving. They are fed on insects obtained in the air, and on the ground. The wisdom of the streaked plumage of the young becomes apparent when one searches for a family either in dry grass or on a dead tree. A well maintained silence when they are in danger completes their protection.

Our attachment to these birds must certainly be for some reason other than their trustfulness. They are about the most annoying birds, from a photographer's point of view, with which we have come in contact. Some small birds, after a short time, have become so trustful as to feed their young on our hands or on our shoulders. Such trustfulness in a Wood Swallow is barely imaginable. From the time the photographer arrives until he is tired of the "fun," and moves on to similar treatment at the next nest,

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the irate parents sweep down from their tree and back again almost unceasingly—a vicious snap of the beak at the camera or operator, on both the outward and the return journey. Various tricks of the trade to which most other birds will succumb are useless. On one occasion the young from three different nests, labelled to show their correct addresses, were removed to a point between the nests in the hope that there would be one brave parent amongst the six, or that the greater number interested would make them bolder. The only result was to promote amongst the parents a serious squabble which put photography out of the question. The human sentiments regarding comrades in distress apparently does not apply to Wood Swallows. The labels were hastily consulted, and the causes of the trouble returned to their respective homes. This tendency to fight at the smallest provocation disappears as soon as the young are safely on the wing. The augmented flock again soars in harmony, and the feuds of nesting days are forgotten.

On two occasions only has success attended our photographic efforts. In the first case, both birds showed up with the required courage, and actually visited the nest together. The old magazine camera was in use at the time, and the picture is not what it might have been. On the other occasion the apparatus was better, but the male bird refused to be convinced of the harmlessness of our plant. The female, after a couple of hours of indecision, gave us unlimited opportunities.

Notwithstanding a bad record from a photographic point of view, the Wood Swallow cannot do otherwise than command the admiration of every Nature lover. The easy soaring flight and the characteristic circular movement of the tail when the bird is at rest add to the charm of the graceful form and the slaty grey plumage. A proudly defiant parent sitting on its small frail nest, or a family of five on a dry branch—three small stumps of tail doing their best to imitate the mature swing of the other two—makes a picture sufficient to compensate for many camera failures. Nor would it be correct to think that the habits of the bird always savour of ferocity. In the course of a day's photography there is often a vexatious delay of half-an-hour while two erring parents, huddled together on their favourite branch, express their mutual affection by a multi-



White-browed Wood Swallows feeding young.

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tude of looks and gestures. Very pretty, no doubt, but not always satisfying to the photographer, parched and sun-baked, who sees the scorching summer day drawing to its close with little prospect of his deserved reward.

Perhaps a little clearer description of this bird is necessary. The male is fine looking; in size somewhat resembling the common introduced starling. The wings, back, and tail are a dark slate colour. The principal feathers of the wings and tail are tipped with a much lighter shade. On the neck and head the slate gives place to a darker colour, which almost approaches black. Over each eye appears a conspicuously white eye-brow, from which the name of the bird is derived. The breast and underparts are of a rich bright colour difficult to describe. Something between maroon and cinnamon-brown occurs to us as being fairly accurate. The colouring of the female is on a similar plan, though much more subdued.

One of the other species of Wood Swallow, the Sordid, is perhaps better known than the White-browed, as it remains in the south throughout the year. It is darker than the previous species, has no white eyebrow, and no bright colouring beneath. Its distinctive marking consists of a couple of white feathers which edge each wing. We have tried to photograph this species many times, and twice have obtained something approaching its likeness. As these results were not a great success, however, they are classed amongst the "second rates" and never appear in public.

The third species very often accompanies the White-browed during its summer visitation. No doubt further north it is quite a common bird. This species is called the Masked, on account of the effect given to its appearance by a head and throat quite black. The remainder of the plumage is a light slate colour, more pleasing than that of the White-browed. One drought year there were numbers of this species building in the Meredith district. The possibilities of photography were unknown to us at that time, however, and our only acquaintance with the species was that obtained while robbing a few of its nests. This was in our very young days.

The nests, the eggs, and the habits of these three species resemble each other considerably.

PART IV.

Birds of
Stream-Side and Tea-Tree Scrubs



Yellow-faced Honeyeater at nest.

CHAPTER X.

YELLOW ROBIN, HONEYEATERS, AND OTHERS.

THE reader may remember the advice we tendered to beginners in the art of photography as to the localities best suited to bird observation. In case he does not, we will repeat our conviction that the class of country dealt with in this part constitutes the best field for bird observers and bird photographers. Our reasons for this view we will also reiterate. A great majority of the small and easily accessible birds, in this part of Australia at any rate, make their homes in the vicinity of permanent water of some kind. A small creek is most often the central feature of such a locality. The comparatively small number of species which are actually mentioned in this part, must not be regarded as an indication contrary to the view we have stated. The majority of the birds to which this portion of the book has been reserved are those which are essentially and almost solely creek dwellers. Due allowance has also to be made for the fact that a considerable number of such birds have been already mentioned as Suburban Birds, and otherwise could have been just as correctly included here. Several of the species also which are dealt with under the heading of "Gumtree and Plain" frequently exhibit a partiality for that portion of such country which borders on permanent water.

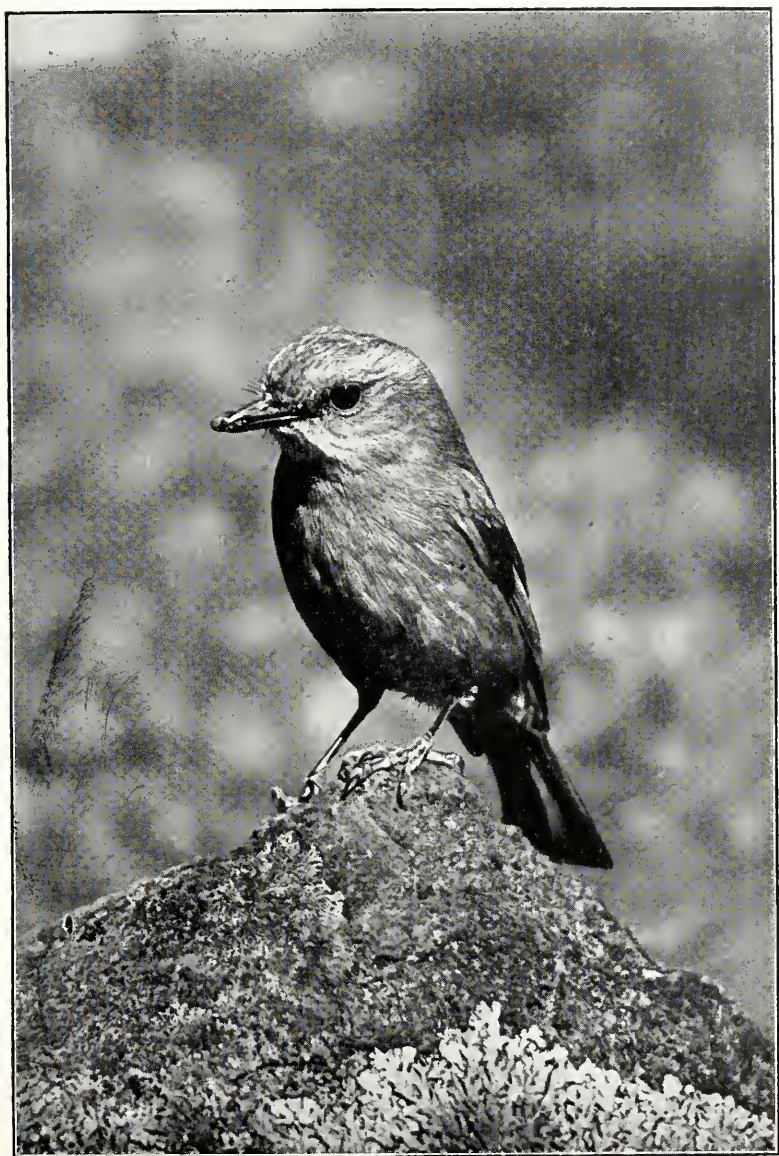
The observer who traverses any considerable portion of creek-side scrub without meeting the Yellow-breasted Shrike Robin, is unfortunate indeed. It is perhaps the commonest bird in such a locality, and in addition

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its coloring makes it, as a rule, a conspicuous object. It can make itself inconspicuous also, however, as is known by the Nature lover who has been mystified by the appearance of some apparent growth on the bark of a tree. On investigation, the growth takes wing, and in doing so discloses a lemon yellow breast which at once establishes the identity of its owner. This habit of clinging, thoughtful and motionless, to the side of a tree, its bright breast turned to the bark and invisible, is universal amongst Yellow Robins. It is only natural that such a common and well known bird should be well provided with popular names. Amongst the most usual are "Yellow Bob" and "Bush Canary."

Our experience of the Yellow Bob is extensive, and we would not like to think that it is by any means ended yet. Even should we not think it necessary to add to our already bulky series of photographs, we will always deem it a pleasant occupation to rest awhile near one of their dainty homes and win their confidence as we have done in other days. The Yellow Bob is essentially a beginner's subject, and is perhaps the most photographed bird of the bush. Every bird photographer possesses its portrait. The reason is twofold. When nesting, the bird is very trustful and its home is usually placed in a position quite accessible without the help of any tackle or appliances.

We regret that in a book, small as this one is, it is not possible to reproduce more than one or two of our many studies of this bird. Furthermore, it has been rather difficult to decide which shall be included, and which shall be left out, as we are rather proud of a considerable number of them. The picture on page 157 shows a Yellow Robin perched on a stone. As this is rather an unusual position, it is as well that we should explain how the bird got there. This bird and its mate were busy feeding two young ones amongst the saplings on our old favourite hill at Ferntree Gully, when we arrived on the scene and disturbed them. It was a boiling hot day, and we were glad of an excuse to rest awhile. We captured the young birds and imprisoned them as usual in one of the camera cases, whereat the parents were much concerned. As young Yellow Bobs are very sleepy and silent at all times, and in the darkness especially, we had some trouble in making the parents understand that the chicks still existed. When we were con-



Yellow-breasted Robin.

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vinced that one or two feeble squeaks had had the desired effect, the camera was sighted on the point of a stone near by, and the prison with its contents moved to within a foot or two of it. It was not long before the adults braved the stare of the lens in their anxiety to be near their offspring, but we had reckoned without one circumstance. We could not understand the conduct of the parents at all. Usually slow-moving subjects they, on this occasion, treated our stone much in the same manner that the cat is generally supposed to treat hot bricks. On touching the stone with our hands we jumped also, and understood. If it was not a hot brick, it was something very like it. We sheltered it for a time, poured water upon it, and then tried again. We were soon successful. This picture gives a good idea of the thoughtful attitude which the observer knows to be characteristic of the Yellow Robin.

The photograph on page 57 shows the bird on its nest, and is useful in two other respects as well. First of all it shows a very perfect and well-adorned nest of which we will say something later, and, secondly, it demonstrates the characteristic trustfulness of the species. It is easy to tell the reader that a certain bird is trustful. In all probability unless he is already a keen observer the term will convey little. It is our hope that this and a few other pictures throughout the book will explain clearly the meaning which may be placed upon the term.

This particular Yellow Bob and her mate built their nest, as is not unusual, only about four feet from the ground, in a small and half dead shrub of some sort. The nest contained eggs, and the day was another scorcher. The moment we arrived at the nest we missed an opportunity for which we had long waited. Before we could adjust the focussing screw and insert a plate, the male bird arrived and fed his mate as she sat on the nest. We waited long for another opportunity, but it came not again. This is a very pretty habit of the Yellow Bob, and so far as our knowledge goes, Mr. A. H. Chisholm, of Queensland, and previously of Maryborough, Victoria, is the only photographer who has succeeded in picturing it. He is to be congratulated. We used many plates at this nest, and all were successful. We also waited long, however, for a chance of picturing the bird on the side of the nest looking at the eggs. We were able to picture this position without

YELLOW ROBIN, HONEYEATERS AND OTHERS

trouble at different parts of the circumference of the home, but not at just the point we wanted. We tried all ways, and eventually succeeded. The negative was a good one, and we were pleased. While the plates were drying one came to grief. We will leave the reader to guess which one it was.

The Yellow Robin is a more handsome bird to look at than the photographs indicate. The blending of the dark brown back with the lemon yellow breast is lost to photography. Some day we hope colour photography will be made perfect. The nest is an example of architecture hard to surpass in the bush. Built of bark and grasses, it is carefully finished, and has hung round the outside strips of bark in a manner clearly shown in the picture on page 57. There seems to be a great deal of speculation amongst observers as to whether these strips are an indication of a sense of the beautiful in the bird mind, or simply the outcome of the instinct of self-protection. We incline to the latter view.

The nesting period of the Yellow Bob is an extended one. Nests may often be found as early as the end of August, and as late as the middle of January. Probably more than one brood is reared in the season, but of this we are not sure. The eggs, in keeping with everything else in the Yellow Robin's life, are pretty. Their ground colour is apple green, while blotches and markings of lilac and brown appear over the whole surface. Perhaps the blotches are closest about the larger end.

Australia is particularly rich in the family of birds known as Honeyeaters. Without any undue splitting of species, probably eighty or more have been listed. As a general rule, they are streamside birds, and will be dealt with in this chapter. Two, however, the Noisy Miner and the Wattle Bird, show a preference for the open country and for larger timber. These species have already been described in the preceding part.

Many of the Honeyeaters familiar to us have so far eluded us photographically. The Yellow-faced species is the one best known, and the neighbourhood of its dainty nest has been the scene of many patient hours, and subsequent failures. In fact, Honeyeaters are never regarded by us as promising subjects. We quite expect that some observers will not agree with this view, but it must be borne

BIRDS OF OUR BUSH

in mind that the distance separating the bird from the awe-inspiring eye of our camera is small indeed. If it were greater, we know positively that our difficulties would be lessened in proportion. However, we would much rather obtain a few pictures from a distance of eighteen inches than a greater number from a distance of thirty.

But to return to the subject: The Yellow-faced Honey-eater, whose picture appears on page 154, has the honour of being our first successfully portrayed subject. It was operated upon with the old camera, and for that reason, perhaps, the picture is hardly up to the standard at which we usually aim. The nest, which is hidden to a great extent in the photograph, was suspended from a forked horizontal tea-tree branch overhanging Deadman's Creek (a cheerful name) at Meredith. It contained two eggs, and the owner thereof was quite unusually tame. Our excitement during these first exploits was intense. The approach of a thunderstorm caused some anxiety as to the necessary supply of sunshine, especially as there was only one plate to use. Great was our feeling of triumph when the image which the reader now sees on paper appeared on the negative. It was our first bird photograph, and its familiarity during several years has never robbed it of a special place in our regard. The same may be said of our second, and perhaps our most remarkable photograph, that of two White-browed Wood Swallows at the nest, which is printed on page 151. After a short period of indecision, during which the aforesaid storm advanced ominously, the Honeyeater condescended to visit its nest. It was difficult to restrain the hand which held the key to the situation until such time as the bird occupied a suitable position. We succeeded fairly well, however, and made good use of our one plate. The sense of elation which we felt at the two successes mentioned has been excelled only once. On that occasion Dr. Leach showed some three or four of our photographs on the screen at a public lecture. We were proud youths that night.

The nest of the Yellow-faced Honeyeater is a beautiful structure, as indeed are most nests of the family. This one was built of green moss and lined with rootlets. It was so filmy in construction that the eggs could be plainly seen from beneath. The eggs follow in coloration those of most other Honeyeaters. The ground colour is a delicate



Spine-bill Honeyeater.

BIRDS OF OUR BUSH

salmon pink, while reddish brown spots and blotches form a zone round the large end.

The bird itself is plain. Its brown plumage is relieved only by a yellow mark, which extends from the gape of the beak past the eye.

The New Holland or White-bearded Honeyeater is a showy and sprightly bird whose ornate appearance rather astonished our ignorance when we captured a young one not far from the situation of the home last mentioned, and a couple of years later. The nature of our apparatus had taken a turn for the better in the meantime, but the disposition of the subject did not bear comparison with the trustfulness of the Yellow-faced. It was, moreover, one of those uncertain days which bridge the gap between foul and fair weather. A serious flood had just subsided, and it was the sun's first day out, weak and tottering after a week's enforced inaction. How the one young bird which we eventually captured had escaped destruction in the flood waters, was a marvel. Certainly it was more fortunate than the occupants of many a creekside home during those dark days.

The wild notes and the erratic careering flight of the parents caused us to expect very little display of trustfulness. They were bold and fearless to the extent of attacking vigorously the innocent camera and the more guilty operator. Posing on a branch on which the lens shone steadily, however, was beyond them. It must have been four or five hours that we lay on the wet ground in hiding behind a hollow log before one bird suddenly realised its parental obligations, paused for a moment on the branch and then away. A few moments later it acted similarly and the shutter clicked. Two hours longer we waited, but never another chance had we.

The New Holland is the most conspicuous of the Honeyeaters known to us. Its general colour is a dark brown, while the breast and underparts are white, streaked with black. The wings and tail are brightly marked with yellow. The eggs resemble those of the previous species. The usual clutch for this family of birds is two.

The hill at Ferntree Gully of which we have previously spoken provided us with pictures of a bird whose likeness we had despaired of obtaining. The Spine-bill Honeyeater had several times been tried and found wanting. We have



Rufous-breasted Whistler (female) at nest.

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found the species to be of that exasperating class which give promise of great things until such time as you actually accept their unmistakable invitation and try them. Then they let you know that you are mistaken, and the disappointment is the more keen. On two occasions previously we had found nests which contained young birds, and, acting on the extreme trustfulness of the parents in our presence, we had settled down to obtain pictures. On each occasion we persisted for hours, but the birds persisted longer.

In November, 1915, we were fortunate enough to capture, after a stiff chase, a couple of young Spine-bills, which had lately left the nest, but were strong fliers nevertheless. It was almost dark, also, and we could not attempt photography that day. We took the young ones to the house, and kept them in an old billy with some dry grass for comfort, and a gridiron for a cage front. In the morning early we returned them to their parents' haunts, focussed the camera on a nearby bracken frond, and waited. While the parents were excited we exposed a few plates, and it was as well that we made full use of these opportunities. The adults soon calmed down, and, though we waited for a couple of hours, did not again favour our fern with their attentions. Our advice to any photographer who sets out to photograph the Spine-bill, or as far as we can see, any other species of Honeyeater, is to lose no time in making his preparations, and to let slip no opportunities if they are given. All the Honeyeaters with which we have had dealings show a decided tendency to tire of posing for the camera fiend.

The Spine-bill is a beautiful little bird of quite remarkable appearance. Its long curved bill and bright colours remind one of the Humming Bird. The back, wings, and tail are of a dark brown colour, and a patch of lighter yellowish brown sets off a white shirt-front effect. The bright red eye adds to its attractiveness. The markings are fairly well portrayed in the picture on page 161.

Other members of the Honeyeater family we have attempted to picture, and we have in some cases exposed plates, but with little success. The rapidity of the movements of the Honeyeaters has been the cause of failure in most instances. A picture of the White-plumed species is one which was put aside for many years, and was restored to a place in our collection only while this book

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was in preparation. It was taken with the old camera and is reproduced on page 51. The "Greenie," to use the bird's popular name, is fairly well known even in our parks and gardens, and about suburban houses. As the name indicates, its general colour is a greenish brown, and its distinctive marking consists of a few white feathers at the ear. The White-naped is a smaller bird, with a greenish brown body, a very dark brown head, and a crescent of white across the back of the neck. A patch of bare blue skin above each eye also assists in its identification. It builds a dainty nest, often high in the smallest branches of a gum sapling, or in a similar position in the creek-side tea-tree. We have not so far found it building in a position which lent itself to photography. Once, long ago, we discovered a nest from which the sitting bird refused to be disturbed even when the slender branches were drawn so far from the perpendicular that the thin frail home stood almost on edge and the position of the bird was upright. What the nest contained we know not, and probably could have ascertained only by using force.

Our experience of the Honeyeater family has recently been enriched by acquaintance with an uncommon and remarkable species. For this opportunity we are indebted to Mr. Chandler, a sincere Nature-lover and an expert photographer, at whose invitation we visited the home of a colony of Bell Miners. Like most other Honeyeaters, this bird is an inhabitant of the streamside scrubs, but unlike others associates in colonies, and nests are built close together. The remarkable tinkling notes resemble the ring of miniature anvils, and are difficult to trace to their sources. Unfortunately for our ambitions to photograph this species, some vandal located and robbed every nest. The general appearance of the bird is an olive green, while a bright yellow mark appears around each eye.

The Dandenong Creek, at Wheeler's Hill, near Oakleigh is, considering its accessibility, a fine ground for observation. We spent the whole of one day some few years back in an attempt to photograph the White-eared Honeyeater which nests there freely. This Honeyeater is a fine-looking energetic bird, with a bright brown-green plumage and a black head. There is a large patch of white over either ear, and this accounts for the name mentioned. The presence of this patch led us into a serious disappointment



Yellow-breasted Whistler (female) on nest.

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on this occasion, too, when our knowledge of certain species was not as extensive as it is now. We were on the track of the Whip Bird, of which bird it was our first experience. When we discovered two young birds of greenish plumage, and having a white patch over each ear, our excitement was intense. Our experience of the Whip Bird, we felt certain, was about to commence in earnest. After a long struggle through dense undergrowth, the young birds were captured, tethered, and invited to squeak. This they did with emphasis. Two large Honeyeaters of the species described then put in an appearance and indulged in sufficient excited protests to convince us that the tethered ones were their own especial property.

We recognised the joke against ourselves, and laughed heartily. However, we considered the Honeyeaters worthy subjects, and spent the remainder of the day in a futile attempt to impress their likeness upon a plate.

There is scarcely a creek-side scrub known to us which is not the home of one or more of the Whistler family. There are two common species to be found in this portion of Australia, and for a long time they laboured under the official title of Thickhead. This name was not intended as an indication of any lack of intelligence on the part of the birds, but such an ill-chosen designation undoubtedly conveyed that idea. Fortunately, that is all now changed, and the Yellow-breasted and Rufous-breasted Whistler bear names which are appropriate and well-merited. There are few more able songsters in our bush, and their clear rich whistle is well-known to all lovers of the wild.

Both the Yellow-breasted and the Rufous-breasted are handsome birds, the males especially. Unfortunately we have no good pictures of the male of either species, and we must reply on our powers of description. The male Yellow-breasted has a striking plumage; the back, wings, and head are of a dark slaty grey colour. The whiteness of the throat is divided from a breast of bright yellow by a narrow band of black. The female is a soberly coloured bird of uniform grey colour. Somewhat of its appearance will be gathered from the picture reproduced.

The male Rufous-breasted is exactly similar to the male of the Yellow species, except that the bright yellow of the breast is replaced by a less conspicuous rufous colour. The female of this species also differs slightly from that of the

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other in that the breast, instead of being uniformly grey, is streaked with darker markings as the picture on page 163 will indicate.

The portrait of the female Yellow-breasted Whistler was easily obtained. The nest was built at a height of not more than three feet from the ground in a patch of bracken. We have not since found another nest of the species built in such a lowly position. It contained two eggs, which is the usual clutch, and the bird was quite evidently anxious for their safety on account of their progress towards incubation. Hardly had the camera been placed in position than she was back on the nest, and remained there while the lens was adjusted to the correct distance. It is often a simple matter to determine which of our pictures were obtained in this satisfactory manner by the higher degree of sharpness attained.

We were able to touch this bird on the nest without disturbing her, but her brightly-coloured consort contented himself by endeavouring to cheer her with his lively song at a safe distance. A thoughtful observer is able to discern the all-pervading wisdom of Nature in these habits of her creatures. In most cases where there is a considerable difference in the degrees of brightness of the plumage between the male and the female, the more soberly coloured will be found more trustful than the conspicuous one. The conspicuous bird is taught by instinct that its correct place, both for its own safety and for that of its home, is well out of the way. We have, however, on two or three occasions, and after a very considerable expenditure of time been able to expose a plate or two close to the male bird. They have not been great successes.

The picture of the female Rufous-breast was obtained at Meredith, and cost considerable trouble. This particular pair of birds were exceptionally wild. The male was not in sight at any stage of the proceedings, and the female made her entrance to the scene at the eleventh hour. Before she consented to do even this, the length of cotton used was increased by instalments until the operator was at a distance of nearly fifty yards and well hidden.

At Ferntree Gully some years later we captured two young birds, but lately out of the nest, and imprisoned them as usual. In a short time both parents had lost much of their fear, and allowed themselves to be photographed

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several times. The negatives of the male bird obtained on this occasion were just on the wrong side of the border-line which marks our standard of excellence. Eventually the female bird fed the young while perched on our hands.

The nests of both species are saucer-shaped, and built of twigs, grasses, and rootlets. Very often the eggs may be seen from beneath. The breeding season commences about October, and continues till the end of the year, or even later.

Once or twice, in the dense timber, we have run across a rarer species of Whistler, one little known, and altogether dissimilar, so far as boldness of colouring is concerned, to the two species mentioned. This bird is known as the Oliveaceous Whistler on account of the general olive-brown appearance of its upper plumage. The throat is whitish and is streaked, while the underparts are reddish brown. The note of the Olive Whistler is a clear musical whistle.

There has been much controversy lately as to the usefulness or otherwise of the Cormorants. They are certainly fishers, and as such undoubtedly conflict with the aims of human fishers. Our one observation of the Little Black Cormorant, however, found him engaged in the comparatively harmless occupation of "fishing" for frogs. The popular designation for any species of Cormorant, namely, the "Shag," is probably better known to most readers.



Black and White Fantail on nest.

CHAPTER XI.

FANTAILS, THRUSHES, SILVER-EYE.

TWO common Fantails will always be found inhabiting the creek-banks in open country. The "Willie Wagtail," or the Black and White Fantail—to honour him with his correct title—is the better known. Its rasping note and alternative sweet little song enliven many a bush track. It has a jerky, erratic flight, and the long tail wags the bird at such times as it is not being used to guide it through the air. As its name implies, it is one of our pied birds. The head, back, tail and throat are of a glossy black, while the breast and underparts are snow white. The Restless Flycatcher is almost the double of this species, but differs in that the white beneath is continued the whole length of the bird—right up to the beak. Its call is a peculiar harsh note, from which it receives the name of "Scissors Grinder."

The nest of the Willie Wagtail is a pretty bowl of bark and grass, built on a horizontal branch, and is covered so closely with cobweb that outwardly little else is visible. The eggs, usually three in number, are of a dirty white ground colour, with a well defined ring of darker stone markings about the larger end. Sometimes this ring slips down, as it were, and appears around the middle or even at the small end of the egg.

The appearance of an intruder is always the signal for a rasping chorus from nesting birds, and the nest is often more easily discovered in this than in any other way. On one of our trips years ago, we were accompanied by a little dog of nondescript breed. His appearance at once raised

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the ire of a pair of Fantails which had their home close to a spot where we were wont to fish. They scolded him, snapped their beaks at him, even settled on his back with such evident ill-humour that the poor little beast could not afterward be enticed near the place.

The photograph reproduced was taken between Greensborough and Eltham, a little off the main road, in a paddock very favourably known to us. It was a considerable distance from water too, by the way, which goes to prove that to every rule there are exceptions. The three eggs which the nest contained were well advanced towards incubation, which fact probably accounted to some extent for the ease with which we were able to obtain pictures. The Willie Wagtail, however, we have seldom found to be a difficult subject. The appearance of the nest is well depicted, but the bird unfortunately rested too low to show the distinctive white breast.

The other common Fantail is the White-shafted, a smaller bird, almost as well known as the Willie Wagtail. In appearance, however, it differs considerably. The "Shafty" is plain and grey, with a very little relief in the shape of white markings to its otherwise sober colouring. Its flight is even more erratic than that of the Willie Wagtail and it is seldom indeed that it flies in anything approaching a straight line. It is not unable to fly straight, however, as is proved by the business-like manner in which it moves to or from its nest.

Our pictures of the White-shafted Fantail are numerous, and it has been difficult to decide which were to be omitted. The bird represented in the photograph on page 173 had built its nest quite close to a week-end house at Evelyn, where we happened to be spending a few days. It possessed one egg, well incubated; in fact, when we passed the place next day a young bird had taken the place of the egg. This Fantail was exceptionally trustful, and our only difficulties arose out of the inconvenient position of the nest and the unwelcome presence of myriads of mosquitoes. The efforts of the latter left impressions on all available parts of our persons and annoyed us mightily.

On this occasion, we came very near to breaking a record of which we are very proud. We were nearly instrumental in destroying the egg, and have to thank the bird itself that our reputation is still intact. The nest was built about



White-shafted Fantail settling on nest.

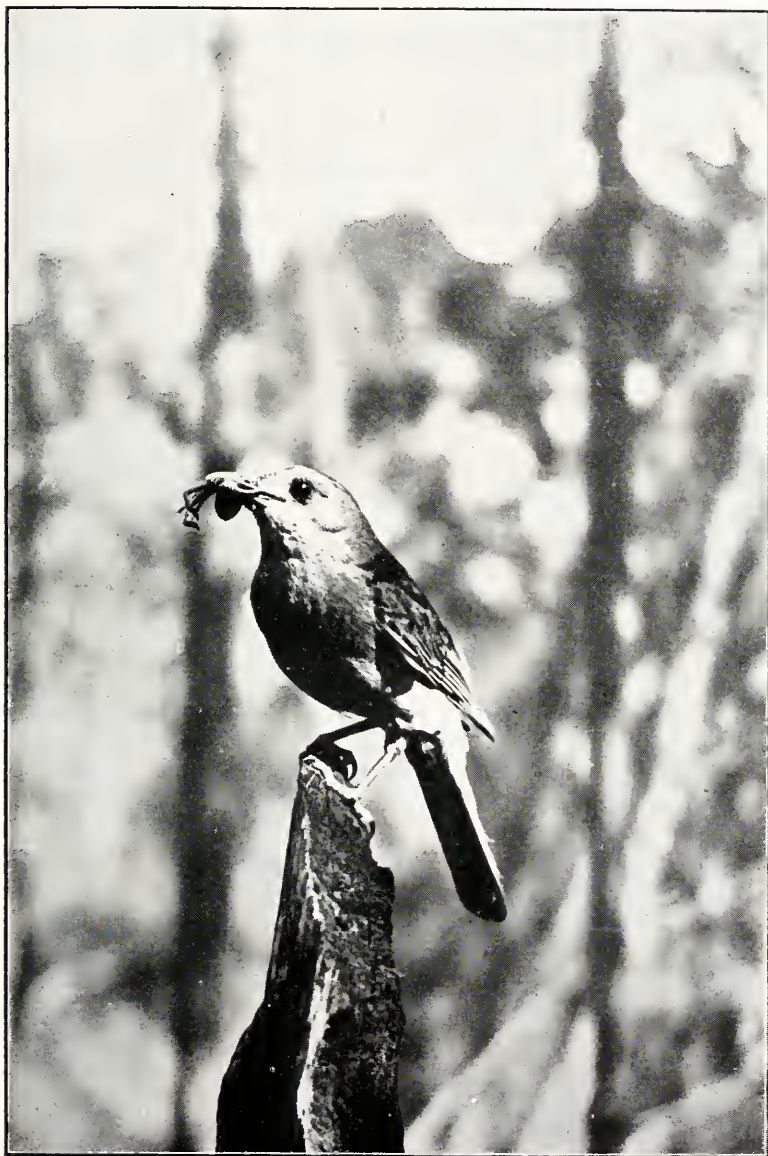
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nine feet from the ground, and, for convenience, we bent the slender branch down to within about seven feet of the earth. We tethered it there with a cord, and during this performance the bird sat as quietly as if there were no intruders within miles. The strain, however, was too much for the cord, which snapped and allowed the branch to shoot violently back to its original position. We expected to see fragments of the egg on the branches above, but found instead the bird apparently unperturbed looking inquiringly over the edge of the nest. Her treasure was undamaged, and we rejoiced.

The nest of the Shafted is a beautiful thing, and a marvel of architecture. Built of materials similar to those used by the Willie Wagtail, it resembles in size and shape a wineglass from which the foot or stand has been removed. The purpose served by the stem or tail, which, by the way, may be seen in the photograph, is not clear. There is little doubt that it has its use in one direction or another. By some it is thought that the continuation of the nest in this way is calculated to render its discovery more difficult, but we have a different theory. The nest is usually built on a slender horizontal branch, and, it appears to us, would possess little stability were it not for the presence of the stem which serves to counteract any tendency towards top-heaviness. We have also noticed that the Fantail invariably commences its nest by the construction of this portion as a foundation for the rest. Possibly the building of such a nest in its usual position would be a difficult matter if the tail were dispensed with. Our view regarding the purpose of the stem is supported by the fact that in one case where we discovered a nest built on a horizontal fork which provided a foundation for building, and assured stability, the tail was much less pronounced. This nest is pictured on page 21.

The White-shafted Fantail usually commences nesting in October, and the season continues until the end of the year. The eggs, usually two or three in number, are very small, rounded, and of a creamy colour, with markings of light stone, especially about the larger end.

Of the beautiful White-shouldered Caterpillar-eater we have had considerable experience, but with it a disappointing lack of success. It is not by any means exclusively a stream-side bird, but as two of the three nests discovered by



Harmonious Shrike-Thrush with spider.

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us have been built in such a locality, we have decided to include it here. It is a fine-looking bird, of pleasing build, and of graceful flight. The sexes vary considerably. The male is black above and white below; it also has a conspicuously white shoulder, which accounts for its name. The female is a plain brown bird. The nest is prettily constructed of grasses, and covered with cobwebs; it is usually shallow, and in this respect somewhat resembles the home of the Brown Flycatcher.

The photographer who discovers a convenient nest of the species and finds the owners trustful, will, if he takes our advice, lose no time in picturing them. Exactly the same exasperating habit common amongst the Honeyeaters is possessed by this bird. Its ardour cools very quickly. Each of our experiences of it has ended in this way, notwithstanding a show of bravery at first which raised our hopes to a high pitch.

Amongst the most common of our creek-side birds, and as one of the most pleasing, must be mentioned the Grey, or Harmonious Shrike-Thrush, appropriately named, be it said. It is a rousing and sweet songster, whose full rich note fills the narrow wooded gullies with music, the incomparable music of Nature's orchestra, never ending and free, but sadly unappreciated.

The Thrush is rather a large bird, comparatively, amongst his creek-side neighbours, yet it lives peaceably. Unlike many larger birds, it appears to find no pleasure in the persecution of the smaller creatures of its kind. It is difficult to call to mind a very common and well-known bird, to which its size approximates. Probably the introduced Blackbird would approach it most nearly. Male and female are alike, or so nearly so that it matters not to any but the scientist. Both are slaty grey in general appearance, and their build is graceful.

In the Meredith district Thrushes are numerous, and their nests, in our day, were often discovered, and too often robbed. We hope that may have changed by now. The species shows a disposition to build year after year in the same position. Each season one pair of birds, well-known to us as well as to other youths in the district, built, or rather reconstructed, their home in a niche of the rocky face of an old quarry. This pair were favourites, and ran little risk of being robbed. The position was too dark to admit of

FANTAILS, THRUSHES, SILVER-EYE

photographs of the birds being obtained, but on three separate occasions with a year or more between, we have photographed the nest. One of the pictures is reproduced on page 179. In front of the nest itself a piece of discarded material of a previous year's home may be seen. This pair of birds always reared two broods in the season. One nest-full usually appeared in the month of October, and a later one in December or January.

At Ferntree Gully also we have located a considerable number of the large bark nests of the species built in the forks of trees or in the hollows of low stumps, but it was a considerable time before we discovered one which lent itself to photography. The bird whose portrait appears on page 175, however, had its nest in the side of a stump in a position which suited us admirably. It was only about four feet from the ground, and the comparative freedom of the surroundings from obstacles to the ingress of sunlight made our task simpler. The birds themselves were not over-confident, and it was only after about two hours' wait, which must have been irksome to a companion who happened to be with us, that we were able to expose five or six plates when the parents perched on a pinnacle of the stump a few feet from the nest of restless youngsters. They would not approach closer, and the pictures show what, to our minds, is a serious defect, though some photographers, apparently, are not so particular. We dislike exceedingly the appearance given to a picture obtained by facing the camera upwards at the subject. However, it could not be avoided on this occasion, and this is one of the few pictures in our first-grade collection which shows this particular fault.

The nest of the Thrush, as has already been mentioned, is built externally of bark. It is lined with grasses and fine roots. The usual clutch of eggs is three or four, large and white, sparsely marked with blotches and spots of dark brown and black.

The Mountain Thrush is altogether dissimilar to the Harmonious, or Grey, species, both in appearance and in disposition. In size alone are they somewhat alike. The Mountain Thrush is a quiet and unobtrusive bird, fond of the shadows and of leaf-strewn ground. It is fitted, in fact, for such localities, as its peculiar crescent-marked plumage harmonises well with dry twisted leaves and twigs of the mountain or creek-side undergrowth. To just what

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extent the markings mentioned constitute a protection will be apparent to an observer who, having located a bird upon the ground, looks away for a moment, and again tries to detect its form.

This bird obtains its living from the earth, and may be identified easily by a well-defined habit of running for a yard or so, pausing awhile and running again until its sharp eye or its sharp ear detects a movement. Very soon an incautious worm or grub is being drawn forcibly from its hiding place by the athletic bird.

Our experience of the Mountain Thrush during nesting has been slight. Many times we have located the bird in the Ferntree Gully district, but it is an early builder, and we always had much else to do in the early part of the season. At Evelyn we located a nest, the owners of which we attempted to photograph, but without success. The species is not at all confined to the mountains, however, and even as lately as August, 1919, we were shown a nest in the Oakleigh district. Boys had reached the spot before we did, and the eggs had disappeared.

The pair of birds which owned the Evelyn nest successfully reared three young ones, of which we took possession as soon as they had grown sufficiently to leave the nest. We tethered them beside a small stump in an open space, set the camera up, and waited for about five hours. We then gave it up and turned homeward sorrowing.

In the larger timber along most of our streams will be found a small bird which the country youth will at once tell you is a Wood-pecker. This is an error, certainly, but in our minds the name serves just as well as any other, so long as it causes no confusion as to the identity of the species. When we roam the bush together, there are more "Spotties," "Stripeys," and "Chewys" spoken of than there are "Pardalotus punctatus" or "Yellow-breasted Shrike Robins." There are far too many sights to be seen during a day in the bush to inflict long-drawn names like these upon each one. However, about the so-called Wood-pecker, which happens to be the White-throated Tree-creeper. Along the course of the Plenty River, and its numerous small tributaries at Greensborough, these interesting birds may be found in numbers. They commence feeding operations about three or four feet from the ground on the bark of a fair-sized gum-tree, and work their way up in spiral



Nest of Harmonious Shrike-Thrush.

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fashion, prying into every crack and corner meanwhile. On reaching the branching limbs where these cracks and corners are less numerous, they betake themselves to a neighbouring tree, where a similar performance is gone through.

We have had experience of one accessible nest of the species, and unfortunately missed what was undoubtedly an excellent opportunity of adding the picture of the bird to our collection. That we allowed other engagements to interfere with our opportunity on this occasion, has been an everlasting regret to us since. The nest was built at the bottom of a hollow about six feet from the ground, in a position well lit and convenient. On our first visit it contained one egg, and the parent was not over-confident. She visited her home a couple of times, however, and we had every reason to believe that by the exercise of a little patience her portrait would have been secured. Three weeks later the young had flown, much to our disgust.

The species is a soberly coloured one, its general appearance being an olive brown. The throat, however, is almost white, and the flanks are much streaked. The nest is of grass, and lined with feathers, and the usual three eggs are a dirty white, spotted with reddish-brown.

Perhaps one of the prettiest nests of eggs it is possible to find is that of the common little Silver-eye or White-eye, a bird with a bad reputation amongst orchardists. It is certainly very partial to soft fruits of all kinds, but the fact that it is a destroyer of pests also should be taken into consideration. The primary producer, and many another besides, is too prone to judge some bird or animal simply by the harm it does, and not by the balance of its good actions over the bad, or the balance of the bad over the good. Very probably the orchardist, if his orchard were suddenly rid of these little birds, would soon find some pest becoming apparent amongst his trees which would bid fair to rob him of a considerably greater proportion of his crop than was previously destroyed by the birds. But the orchardist sees the Silver-eye eating his fruit, and does not see it destroying the pests which affect his trees. Hence the bird suffers. To just what extent the White-eye performs useful service we are unable to say; but we feel sure that the service outweighs the harm done to the fruit.

We set out to describe the nest of the White-eye, and



Young Bronze Cuckoo in nest of Striated Tit.

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have digressed. Built of grasses and mosses, and suspended amongst green bracken fern, the nest is particularly dainty. The eggs are a beautiful light blue, like a summer sky, and their presence adds to an already pretty picture. On two or three occasions we have attempted to photograph the adult White-eye, but so far without success. We must admit that they are particularly greedy birds, and they always appear to be more intent upon satisfying their own internal wants than upon defending their homes.

As photographers, we are not exceedingly interested in that family of birds known as Cuckoos. The reason for our attitude is that, as the Cuckoo builds no nest of its own, photography of the adult is almost out of the question. However, these birds enter considerably, if uninvitedly, into the lives of many of the species we have mentioned, and so are deserving of reference. A bird which builds no nest of its own, but which deposits its egg in the home of another species, and also allows foster-parents to rear its young, is an anomaly in the world of Nature. Just why the Cuckoo should be deprived of the privileges of parenthood is difficult to determine. We have not seen a theory advanced. The disadvantage is not wholly on the side of the Cuckoo. The unfortunate bird which returns home one fine day to discover a strange egg in its nest, is destined to disappointment, even if at the time it does not realise the fact. That these foster-parents do regard the Cuckoo as a pest is quite patent by the commotion which its appearance in their midst invariably causes. It seems certain that they do connect the presence of the strange egg with the presence of their unwelcome neighbour. If the Cuckoo's egg is the first in the nest, moreover, the nesting birds quite often display sufficient intelligence to cover it up and thus prevent its incubation. Usually, however, the Cuckoo nestling appears along with the sons and daughters of the unfortunate owners of the nest. It quickly asserts an unjust claim to most of the food supply, and, strengthened as a result of this greed, ejects one by one the rightful heirs to the family residence. The adopted chicken is thereafter fed and cared for as if it had nothing at all to do with the loss of the other members of the brood.

Very often the young Cuckoo is bigger and stronger than the foster parents which feed it, and far outgrows the nest it occupies.

FANTAILS, THRUSHES, SILVER-EYE.

There are four species of Cuckoo known to us. Two are small and very much alike. These are the Bronze Cuckoo and the Narrow-billed Bronze. The other two are larger, and are known as the Fantail and the Pallid species. All have weird whistling calls, and one or two of the species may be heard calling throughout the night.

On Phillip Island we found Cuckoos fairly numerous, and a little Striated Tit whose nest hung in the topmost branch of the beach tea-tree, soon found a young Bronze Cuckoo the sole occupant thereof. The rightful heirs to the home we found on the ground beneath very much the worse for wear—but perhaps it was just as well. When one saw how completely the Cuckoo filled the cosy interior of the nest, one realised that any other occupants would have had little chance of obtaining sufficient air and food to keep body and soul together.

Anyway we hauled up the camera and fastened it before the nest. We were anxious to obtain pictures of the little foster-parents feeding the large youngster, but the Tits thought differently, and we had eventually to incline to their view. We, however, operated upon the young bird himself in several positions. The picture on page 181 will show how effectively he filled his tiny home.

Days after we heard his monotonous cry of everlasting hunger, and saw the energetic foster-parents doing their utmost to satisfy his wants. If they were disappointed with the result of their labours, they certainly did not show it. To the human eye they appeared particularly proud of the chick.

Tits, Wrens, Scrub-Wrens, Honeyeaters, and many other small birds are common foster-parents of the Cuckoo.



Coachwhip Bird.

CHAPTER XII.

COACHWHIP BIRD.

THE subject of this chapter is one of those rarer and less-known birds, whose portrait the bird-photographer prizes greatly. Our few studies of the species are a source of additional satisfaction from the fact that they were hard-earned. For several seasons we tried constantly to obtain a picture, but in vain.

We have been in considerable doubt as to the correct heading under which to mention the Coachwhip Bird. We were faced with the fact that our experience of it had been almost wholly confined to the class of country described hereafter as Mountain Gullies. In our first draft, in fact, the Whip Bird was included in that portion of the book. It was on account of a fear in our minds lest we should mislead, and perhaps disappoint, the beginner that we decided to alter our original intention. We have mentioned more than once that the deep mountain gullies are the most difficult places for the practise of the bird-photographer's art. The Whip Bird is found there, but not there alone, so we have decided, in fairness to the beginner who will naturally experience a desire to picture rarer birds, that we should point out that there are many localities which provide nesting places for this remarkable one, without imposing the serious disabilities, from a photographic point of view, which the mountain gullies certainly do. Even along the banks of the Dandenong Creek a little beyond Wheeler's Hill in the Oakleigh district we have found the bird nesting.

About Ferntree Gully the Coachwhip Bird abounds,

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and it is here that our principal opportunities for observation have occurred. With the convenience of the week-end house we were able to devote a considerable time to an attempt to elucidate some of the mystery which appears to surround the peculiar call of the species. Almost everyone who has spent any time in those localities, now so popular as holiday resorts, in the mountainous districts around Ferntree Gully, Warburton, and Healesville, will have heard the loud note resembling the crack of a stock-whip, which accounts for the bird's name. Some will also have noticed that in many instances two short notes follow directly on the completion of the whip-crack. Observers are apparently fairly well agreed that the male bird is responsible for the whip-crack, but about the origin of the concluding notes there is considerable controversy. We will not weary the reader with a full account of our investigations of the matter, but will simply state our conviction that the female bird utters the two short notes in answer to the call of her mate.

The appearance of the nest of the Whip-Bird is shown in the picture on page 23. This particular one was built in bracken fern at a height of not more than two feet from the ground. Dull weather prevented our doing more than picturing the nest and eggs.

The photograph of the adult bird was obtained the following season, not more than ten minutes' walk from the house. The characteristic chuckling note of one of the birds first drew our attention, and we searched the spot. The excitement which our presence caused soon satisfied us that this pair had treasure somewhere near. It was only after we had retired two or three times, however, to some little distance that their movements led us to a little thicket of fallen branches. Here we discovered two fully-fledged young birds, and captured them promptly.

The young birds were tethered carefully, and the camera sighted on the point of a small stump in a cleared space. A few hours' trial of this method convinced us that it was not workable, and, in fact, left us rather doubtful of success under any circumstances. As a last resource we moved the young birds to the inside of a hollow stump amongst the undergrowth and focussed on a point on the side of the stump. After another couple of hours, we were successful to the extent shown in the picture on page 184. We exposed



Young Yellow-breasted Whistler.

COACHWHIP BIRD

four plates, and this result involved eight hours or more of hard and trying work.

Some description of the Whip Bird, other than that given by the picture, is necessary. In size, shape, and excitable disposition, it is not unlike the introduced Blackbird of our gardens. When disturbed from its home in the thickets it leaves with similar commotion and much scolding. It is a dark-coloured bird, too, dark greenish black, harmonising well with the position usually chosen as its home. The only relief to the colouring mentioned is a large white mark at the lower portion of the head and neck, and a white mottled marking on the breast. The outstanding feature of the Whip Bird's appearance, however, is a crest which adorns its head. The photograph shows it clearly. The picture also gives the impression of a bird full of life and vigour, and in this respect is a true likeness. We have seen, besides those taken by ourselves, two or three photographs of the Whip Bird, and the alert, active appearance is evident in all.

Two eggs invariably form the clutch. Their ground colour is of light blue, while a limited number of black spots and markings appear evenly distributed over their surface. They are exceedingly pretty.

PART V.

Birds of the Mountain Gullies



Dancing Mound of the Lyre Bird.

CHAPTER XIII.

THE PRINCE OF MOCKING BIRDS.

BY reason of certain features, unsatisfactory from a photographic standpoint, of the class of country represented in the picture reproduced here, and because of the apparent scarcity of subjects mentioned, the reader may form the opinion that the deep forest and the Mountain Gully are lacking in interest to the bird-photographer. If our method of setting out this book has, in any way, fostered such an impression, we hasten to correct it. It was our intention merely to convey our conviction that such localities are not altogether suited to the beginner.

Far from considering such country uninteresting, we can truthfully say that the localities mentioned here hold for us a very strong and a very deep attraction, which, once discovered, has been held in check only as a result of a desire, natural to all beginners, to add quickly to our collection of pictures. We will admit that such cannot be accomplished in the dark fern gully. However, it is the ideal collecting ground for the photographer who wishes to encounter rare birds and is content to use his camera seldom and under conditions of difficulty greater than usual.

In the deep quiet and the subdued light of the forest, there is an air of mystery. Even those commoner birds which have forsaken their usual habitations on the plain, and by the creekside for these still, dark haunts seem to have put aside their accustomed cheerfulness and song. Their hushed voices sound ghostly. The leafy mould of centuries, moreover, stifles the footfall of Nature-lovers,

BIRDS OF OUR BUSH

and, in sympathy with their surroundings, they speak in a whisper or remain silent.

In such a locality one would expect to meet the marvellous and the uncanny, and it is fitting that here should be the home of one of the most remarkable of Nature's creatures. The silence, the solitude, the subdued green light, form a remarkably apt setting for the prince of all mocking birds, and the most strikingly beautiful of Australia's feathered inhabitants.

It has been the privilege of few people in these days of advanced civilisation and settlement to see the Lyre Bird in its natural surroundings. For this reason, amongst others, we have worked long and steadily in the hope that we should be able to supplement any description we may attempt by faithful likeness through the medium of photography. So far we have not succeeded, and it is with deep disappointment that this volume is sent to press without any illustration to assist our powers of description. Words in such a case convey little, even were we gifted to use them. However, if we have been unsuccessful in picturing the Lyre Bird, we certainly have learned somewhat of its habits in the attempt.

We remember well our first experience. We were but very young at the time, and so were unequipped with the means and the opportunity for carrying out our ambitions in the study of the ways of Nature. When the week-end house at Ferntree Gully was built, we saw a gleam of hope, and decided to work the surrounding hills during the nesting season. It was while filling in time making walking tours of the country before the commencement of the season that we met with our quarry.

We had walked from the Gully a distance of seven miles or so to Olinda, a small township in the heart of the mountains, and had sat down to recuperate before commencing the return journey, when we became conscious of the hearty laugh of an old Kookaburra—a laugh in which our practised ears detected something peculiar. Some subtle variation in its delivery or in its pitch, or, it may have been, something unusual in the position from which the sounds emanated. We realised that we had discovered a Lyre Bird.

The reader must remember that at this time we had read little about any of our native birds. What we had read about the Lyre Bird had left us with the clear convic-



The Haunt of the Lyre Bird.

BIRDS OF OUR BUSH

tion that if one so much as breathed within a hundred yards of this shy species, it would detect one's presence and vanish. Such ideas of the wariness of the species under notice, and of some others beside, we have found absolutely without foundation. Anyway, we sat where we were for a considerable time, almost afraid to move. We very soon had proof of the extraordinary powers of mimicry possessed by the Lyre Bird as our particular specimen seemed determined that our first experience of his kind should not disappoint us. The screech of the Cockatoo, the call of the Whistler, the Magpie, the Butcher Bird and the Rosella, even the bark of a dog, were reproduced to such a degree of perfection that we were unable to find fault. These imitations were interspersed with a shrill short whistling note which we have found to be the natural call of the bird. There were also short spaces of silence, the import of which we knew not at any time.

After we had heard for a little time this wonder of the bush, our ambitions demanded sight of it also. With great care, mainly unnecessary, we made our way along a path to a fallen tree, and from this point of vantage we were able to discern the famous tail of the male bird as its owner danced—or rather marched—on a small mound amongst the bracken. The remainder of the bird and his companion, if she happened to be present, were hidden from view. After we had watched the movements of the quivering tail for five minutes or so, the concert ended. The tail, held low, became passive, and then followed its owner silently through the ferns.

We subsequently observed the Lyre Bird at close quarters many times in and around the Ferntree Gully district. We also witnessed more closely the efforts of a male to impress a seemingly hard-hearted female with the fervour of his attentions. In the reserve which includes the well-known fern gully at Ferntree Gully, at least one pair of these noble birds have their headquarters—or, rather, they had until a certain "bird-lover" shot one or both birds "for scientific purposes." One morning early, while the mist still hung on the hills, we heard the male bird imitating the call of the Kookaburra from a direction in which we knew that a fresh mound lay. This dancing mound was a rounded eminence in the centre of a straggling patch of bracken, and we were able to discern the shadowy form of

THE PRINCE OF MOCKING BIRDS

the male bird when we had approached within a hundred yards or so. That last hundred yards we did on hands and knees, and in other undignified positions, carefully choosing our opportunities for advancing while the bird was engaged with his song. We successfully reached a spot within six feet of him, and just outside the screen of bracken.

The entertainment was continued for half-an-hour with much prancing, bowing and scraping on the part of the fervent male, and with imitations of perhaps a dozen different bird calls. Every half minute or so he stopped suddenly, as if he had detected danger, and listened intently. At first we feared that our presence had been detected, but we soon became aware that this pause, a well-defined habit of the species, is a precautionary measure only. So long as the observer remains silent and motionless during these intervals, the danger of disturbing the Lyre Bird is as small as with most other species.

The object of this passionate display, we soon discovered, was within a few yards of the spot, feeding unconcernedly amongst the bracken in what must have been a disappointingly heartless fashion. As to whether she were satisfied with his lovemaking she made no sign. Probably she wished him to believe that she neither noticed nor understood it. Presently his song ended and he strode solemnly into the bracken where the pair fed together awhile. Fortune led them on one occasion across an open space within four feet of where we lay. Although so close that the soft earth disturbed in the course of their operations reached us, they were quite unconscious of our presence, a fact which directly negatives the popular conception of their wariness. Eventually they were lost to sight down the gully. We followed later in the hope of discovering a nest, but were disappointed.

The Lyre Bird is not difficult to describe. Were it not for the remarkable tail of the male bird, there would not be much in its appearance to attract attention. It is a plain dark brown bird, about the size of the common domestic fowl. The feet are very large and heavy, and well adapted to their purpose of disturbing the soft loam and the creatures that reside therein. It is the tail of the male, however which makes the bird. This consists of two large brown and white feathers, arranged in such a way as to form the outline of the lyre of olden times, from

BIRDS OF OUR BUSH

which the name of the bird is derived. Two strong centre feathers, and several white filmy ones complete the design. The tail of the female is long and of the same colour as the rest of her plumage. Both birds, when moving through the undergrowth, carry the tail in a line with the body. The Lyre Bird is not a strong flier. It specialises in silent down-hill glides, during which the wings are vibrated little. We have not seen the bird fly uphill, or upward at all, more than a few feet at a time.

It behoves Australians to see that the law which was framed to protect these birds against their greatest enemy—man—is honoured in the spirit and the letter. The system which allows a collector—even should he be a genuine scientist—to obtain a permit to destroy a species of such interest and of such numerical weakness, requires revision—and that promptly.

CHAPTER XIV.

OTHER RARITIES.

THE country beloved of the Lyre Bird is also the home of a species which, though not to the same extent remarkable, is almost as rare. It is said that the affinity of the species so far as locality is concerned is responsible for the name applied to the bird here described. Early observers who sought the Lyre Bird regarded the Pilot Bird as being an unfailing guide to the haunts of the former. Whether there is any truth in this explanation of the bird's name we know not, but we do know that in our experience the two species have invariably been found close together. We believe also that other observers have noted the same fact.

In the dark gullies around our week-end quarters, these birds were fairly numerous, but their quiet ways and sober colouring made it quite a simple matter to overlook them. For some time probably we did succeed in overlooking them, until one day we stumbled across them—figuratively, and literally also. We were spending a few days at the township of Olinda previously mentioned, and while clambering down a thickly wooded hillside, one of our party did actually stumble and disturb a nest, the presence of which would certainly otherwise have been overlooked. The contents at once set up a great din, which proved their undoing. We recognised that the species was a stranger to us. We waited awhile, and a silent chocolate brown bird arrived on the scene with a beak full of large moths and the like, which it proceeded to dispose of in a manner which appeared to please a very noisy brood. The parent then departed

BIRDS OF OUR BUSH

down-hill again as silently as it had arrived. The adults made several subsequent visits while we waited at the spot, and appeared to take not the slightest notice of our presence.

When we arrived back at the boarding-house, Dr. Leach's "Australian Bird Book" was consulted, and our find was identified. The word "very rare," which appeared opposite the species in the publication referred to, whetted our appetite for pictures, and next morning's breakfast of ham and eggs was scantily appreciated. As soon as we felt able, with due respect to the etiquette required on such occasions, we left the table and collected our kits which included, moreover, a very substantial lunch and a billy of tea.

We found the trustfulness of the parents unaltered during the night. If our feet happened to be across the path they wished to pursue, they hopped on to and over these rather prominent appendages apparently unconcerned. As a matter of fact, we have invariably found the species to be as trustful of the human being as is the barn-door fowl. While we ate our lunch the Pilot Birds picked up the crumbs, especially the buttery bits, with apparent relish. The young birds were also treated by their parents to this unusual diet. Sometimes a crumb would fall on a boot, and our subjects essayed its removal therefrom even while the foot was swung to and fro. The difficulties in the way of successful photography, which were many and serious, were certainly no fault of the birds. They came and went just as if such things as human beings and cameras with large staring eyes never existed. In the depth of the hill-side scrub, however, the difficulty of obtaining a sufficiency of strong light for short exposures was almost insurmountable. It was quite useless to attempt to remove the branches and leaves which stood in the way; it would have taken a week's work to do it, and we had but three days. Now and again, however, a little patch of light admitted from some rent in the leafy roof above advanced ever so slowly towards the nest, hung there a while and departed ever so quickly. The usual difficulties of the bird photographer were in attendance. When the light was ready the birds were not, and *vice versa*. By blocking up the entrance of the nest and persisting in other little unkindnesses, off and on throughout the day, we were able to expose about twenty plates, and expected some sort of result from ten of them. All were absolute failures except two, which



Pilot Bird at nest.

BIRDS OF OUR BUSH

escaped that title by a very narrow margin. The result of another serious difficulty is clearly apparent in the picture. Beside the nest, and on the side of it which faced the sunlight, there was a large fallen tree, the trunk of which effectively prevented the camera being placed at a suitable distance. The exposures were made, therefore, from a point considerably closer than is usually the case. The disproportionately large image of the bird is the direct result of making exposures from too short a distance.

Many times since, mainly on account of the knowledge of their call and habits gained at Olinda, we have located nests of the Pilot Bird around Fern-tree Gully, Belgrave and Ferny Creek. The same ignorant trustfulness we have found universal, and the same difficulties of lighting also—only more pronounced.

Our remarks about the ease with which the species may be observed applies only when a nest has been located. It is extremely hard to follow the movements of the quiet brown bird over the soft brown soil and amongst the dense undergrowth. When searching for food for their nestlings they frequently wander a hundred yards or more from home, and explore every inch of the ground thoroughly on the outward journey. This invariably takes a considerable time, and sorely tries the patience of the photographer. During this search for food we have always been able to keep track of the birds by their call. They show little hesitation in answering even an amateur representation of their quiet musical note. When they have collected a beakful of all manner of creeping and crawling things, however, the critical moment for the observer is at hand. Quite suddenly, as if they had just that moment remembered the existence of a brood of hungry chicks, they take wing and glide swiftly and silently amongst the undergrowth homeward. If the observer then fails to keep them in view, his work goes for nought, as more than likely the next foraging trip is in a different direction and out of earshot.

The trustfulness of the Pilot Birds is often amusing in its simplicity. When they have brought a large beakful of insects, or a large, wriggling spider, and thrust it in the direction of three gaping mouths, we have frequently disappointed all by taking it from the adult beak. The expression of blank astonishment which such treatment caused was good to see. When the old bird recovered sufficiently,



Rufous Fantail on nest.

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she would snatch the dainties back with the indignation of a petulant child. Sometimes this form of amusement was continued for a considerable time, until the mauled and mangled state of the erstwhile spider made further interference unpleasant. There are few scenes upon which we look back with greater pleasure than on our experiences of the Pilot Birds. They suffered by our presence, moreover, nothing more serious than annoyance.

The appearance of the Pilot Bird will be gathered somewhat from the picture appearing in this book. Its colour is a warm chocolate brown, well calculated to escape attention in the darkness of the mountain gully. It works in and out amongst the small ferns and through patches of sword grass in very much the same manner as the Scrub Wren operates in more open country. As a matter of fact we have been struck by the similarity in many respects between the two species. The Pilot Bird flies little, but proceeds over the ground by a series of hops, unmistakable when once witnessed.

The nest also is not unlike that of the Scrub Wren. That of the present species is built usually of coarse grass and lined warmly with feathers and fur. The two eggs are of a slaty-brown ground colour, with indistinct darker markings around the broad end.

A much more common bird of the Mountain gully is the Rufous Fantail, a species much resembling, in size and habits, the White-shafted Fantail already dealt with. But while the White-shafted Fantail prefers the streamside growth in open country, the Rufous species nests almost invariably within hearing of a mountain stream.

The nests of the two species are very much alike, as a comparison of the pictures on pages 173 and 201 will show, but in colour the birds are somewhat dissimilar. The upper plumage of the Rufous Fantail is warm brown in general appearance, but the forehead and lower back are rust red. The throat is white, and the underparts a neutral grey.

The Rufous Fantail is not nearly as well-known as the White-shafted, and we were fortunate to locate a nest in a position where the light was fairly bright. Some idea of the class of locality selected by the species will be gathered from the picture appearing on page 59. The nest contained two eggs, for whose safety the birds were much concerned,

OTHER RARITIES

and we had little difficulty in inducing them to face the camera. But it was quite impossible to make instantaneous exposures. As a last resource, we used time exposures of a couple of seconds' duration, and were surprised to find that the results showed no signs of movement. As an experiment we gave, in one case, an exposure of ten seconds, and even this picture was quite clear and sharp. We must admit that our early remarks about the uselessness of time exposures is rather discounted by this experience, but the stillness of a mountain gully allows of exposures which would be impossible elsewhere.

The week-end house at Ferntree Gully also afforded us opportunities for observing two rare and beautiful species of Robins. A black and white Robin and two red-breasted Robins have already been mentioned as inhabitants of the open country. Here we have two species with pink breasts. One species is called the Pink-breasted and the other the Rose-breasted; but we have, more than once, had a little difficulty in distinguishing them when apart. Once their acquaintance has been thoroughly made, however, they may be readily recognised. The breast of the male Rose-breasted has much more the character of red in its composition than has the bright pink of the Pink-breasted male. The head and back of the Rose-breast, moreover, is of a dark slate colour, while in the Pink-breast this is replaced by a dull black. Unfortunately our experience of these interesting species is limited to observations of the birds, and does not extend to their nesting habits.

On the outskirts of the popular township of Belgrave, in the Dandenong Ranges, a pair of the Rose-breasted species evidently have their headquarters, as we have noticed them about the same locality three seasons following. A close watch of their movements on each occasion convinced us that they were not nesting. They flew from post to post before us as we walked, and chased each other with every indication of a full enjoyment of life. We often wonder whether the collector's gun has yet ended their joy.

Of the Pink-breasted species we have had more extensive experience, though even that does not amount to much. Probably we would have succeeded in locating a nest before now were it not for the fact that, if a photographer would obtain pictures in the darkness of the Mountain gully, he must devote considerable time to the subject in hand, and

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restrain any desire to wander from the track in a search for other birds. Thus it has happened that two or three times when engaged on other work, we have seen and heard the Pink-breasted Robin in the vicinity, but have allowed the opportunity to pass. Had we been able to visit the locality again on the following day we might have been successful in locating a nest.

Even more slender is our first-hand knowledge of two rare Flycatchers, which we have also observed in the Ranges. They are birds upon which any Nature photographer would be pleased to expose numerous plates, even at their present high price. The Leaden and the Satin Flycatcher are both inhabitants of the class of country beloved of the Lyre Bird and the Pilot Bird, and we have not been able to determine whether they are really remarkable-looking birds or whether their association with the silence of the forest accounts for such an impression in our minds. The Leaden species we encountered first at Myer's Falls, near Healesville, where a single specimen was performing manœuvres in its search for insects. If he appreciated mosquitoes, and they were one-tenth as numerous around his person as they were round ours, he should have made a very good living.

"Leaden Flycatcher" is a particularly apt term. The bird's plumage is a dark leaden grey, with a greenish sheen. The throat and breast are similarly coloured, while the remainder of the underparts is white.

The Satin Flycatcher is very similar to the Leaden, except that the darker portion of the plumage is a beautiful shining dark green. Our few observations of the species have been amongst fairly high timber, though we are not sure that they show preference for such positions.

The nests of both species are built high, well out of the way of most photographers.

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Shutter, One-speed	31	Yellow-faced Honeyeater	65, 159
		Yellow-tailed Tit	67

LIST OF SCIENTIFIC NAMES

Babbler, white-browed	<i>Pomatorhinus superciliosus</i>
Bee-eater	<i>Merops ornatus</i>
Bell Miner	<i>Manorina melanophrys</i>
Blue Wren	<i>Malurus cyaneochlamys</i>
Bottle Swallow	<i>Petrochelidon ariel</i>
Butcher Bird	<i>Cracticus destructor</i>
Caterpillar-eater, white-shouldered	<i>Lalage tricolor</i>
Chat, white-fronted	<i>Epthianura albifrons</i>
Chough, white-winged	<i>Corcorax melanorhamphus</i>
Coachwhip Bird	<i>Psophodes crepitans</i>
Cockatoo, black	<i>Calyptorhynchus funereus</i>
Cockatoo, gang gang	<i>Callocephalum galeatum</i>
Cockatoo, rose-breasted	<i>Cacatua roseicapilla</i>
Corn Bird	<i>Cisticola exilis</i>
Cuckoo, bronze	<i>Chalcococcyx plagosus</i>
Cuckoo, fantail	<i>Cacomantis rufulus</i>
Cuckoo, narrow-billed bronze	<i>Chalcococcyx basilis</i>
Cuckoo, pallid	<i>Culculus inornatus</i>
Cuckoo Shrike, black-faced	<i>Graucalus melanops</i>
Diamond Bird, orange-tipped	<i>Pardalotus assimilis</i>
Diamond Bird, spotted	<i>Pardalotus punctatus</i>
Dollar Bird	<i>Eurystomus pacificus</i>
Emu Wren	<i>Stipiturus malachurus</i>
Fairy Martin	<i>Petrochelidon ariel</i>
Fantail, black and white	<i>Rhipidura tricolor</i>
Fantail, rufous	<i>Rhipidura rufifrons</i>
Fantail, white-shafted	<i>Rhipidura albiscapa</i>
Finch, chestnut-eared	<i>Taeniopygia castanotis</i>
Finch, spotted-sided	<i>Stagonopleura guttata</i>
Finch, red-browed	<i>Ægitha temporalis</i>
Flycatcher, brown	<i>Microeca fascians</i>
Flycatcher, leaden	<i>Myiagra rubecula</i>
Flycatcher, restless	<i>Scisura inquieta</i>
Flycatcher, satin	<i>Myiagra nitida</i>
Frogmouth, tawny	<i>Podargus strigoides</i>
Grass Bird	<i>Megalurus gramineus</i>
Grass Warbler	<i>Cisticola exilis</i>
Ground Lark	<i>Anthus australis</i>
Heron, white-fronted	<i>Notophox novae-hollandiae</i>
Honeyeater, New Holland	<i>Meliornis novae-hollandiae</i>
Honeyeater, spinebill	<i>Acanthorhynchus tenuirostris</i>
Honeyeater, white-eared	<i>Ptilotis leucotis</i>
Honeyeater, white-naped	<i>Melithreptus articapillus</i>
Honeyeater, white-plumed	<i>Ptilotis penicillata</i>
Honeyeater, yellow-faced	<i>Ptilotis chrysops</i>
Ibis, straw-necked	<i>Carphibis spinicollis</i>
Kingfisher, great brown	<i>Dacelo gigas</i>
Kingfisher, sacred	<i>Halcyon sanctus</i>
Kookaburra	<i>Dacelo gigas</i>

LIST OF SCIENTIFIC NAMES

Lyre Bird	<i>Menura victoriæ</i>
Magpie, black-backed	<i>Gymnorhina tibicen</i>
Magpie, white-backed	<i>Gymnorhina leucanota</i>
Magpie Lark	<i>Grallina picata</i>
Miner, noisy	<i>Myzantha garrula</i>
Mistletoe Bird	<i>Dicaeum hirundinaceum</i>
Oriole, olive-backed	<i>Mimicetes sagittata</i>
Pardalote, orange-tipped	<i>Pardalotus assimilis</i>
Pardalote, spotted	<i>Pardalotus punctatus</i>
Pigeon, bronzewing	<i>Phaps chalcoptera</i>
Pigeon, wonga wonga	<i>Leucosarcia melanoleuca</i>
Pilot Bird	<i>Pycnophilus floccosus</i>
Pipit	<i>Anthus australis</i>
Plover, stone	<i>Burhinus grallarius</i>
Quail, stubble	<i>Coturnix pectoralis</i>
Rail, lewins	<i>Eulabeornis brachypus</i>
Rail, pectoral	<i>Eulabeornis philippinensis</i>
Robin, black and white	<i>Petroica bicolor</i>
Robin, flame-breasted	<i>Petroica phoenicea</i>
Robin, pink-breasted	<i>Petroica rhodinogaster</i>
Robin, rose-breasted	<i>Petroica rosea</i>
Robin, scarlet-breasted	<i>Petroica leggei</i>
Robin (Shrike), yellow-breasted	<i>Eopsaltria australis</i>
Rufous Fantail	<i>Rhipidura rufifrons</i>
Scrub Wren, white-browed	<i>Sericornis frontalis</i>
Shrike Robin, yellow-breasted	<i>Eopsaltria australis</i>
Shrike Thrush, harmonious or grey	<i>Colluricincla harmonica</i>
Shrike Tit, yellow-breasted	<i>Falcunculus frontatus</i>
Silver-eye	<i>Zosterops coerulescens</i>
Speckled Warbler	<i>Chthonicola sagittata</i>
Swallow, bottle	<i>Petrochelidon ariel</i>
Swallow, welcome	<i>Hirundo neoxena</i>
Thrush, harmonious or grey	<i>Colluricincla harmonica</i>
Thrush, mountain	<i>Turdus lunulata</i>
Tit, brown	<i>Acanthiza pusilla</i>
Tit, buff-tailed	<i>Acanthiza reguloides</i>
Tit, striated	<i>Acanthiza lineata</i>
Tit, yellow-tailed	<i>Acanthiza chrysorrhoa</i>
Tom-tit	<i>Acanthiza chrysorrhoa</i>
Tree-Creeper, white-throated	<i>Climacteris scandens</i>
Wattle Bird	<i>Acanthopneuste carunculata</i>
Whistler, olivaceous	<i>Pachycephala olivacea</i>
Whistler, rufous-breasted	<i>Pachycephala rufiventris</i>
Whistler, yellow-breasted	<i>Pachycephala gutturalis</i>
Wood Swallow, masked	<i>Artamus personatus</i>
Wood Swallow, sordid	<i>Artamus leucorhynchus</i>
Wood Swallow, white-browed	<i>Artamus superciliosus</i>
Wren, blue	<i>Malurus cyaneus</i>
Wren, emu	<i>Stipiturus malachurus</i>
Yellow-breasted Robin	<i>Eopsaltria australis</i>



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